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WITHERING
ON THE
SCARLET FEVER.

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Guy Woodgat

AN

ACCOUNT

OF THE

SCARLET FEVER

AND

SORE THROAT,

OR

Scarlatina Anginosa;

PARTICULARLY

AS IT APPEARED AT BIRMINGHAM IN THE YEAR
1778.

TO WHICH ARE NOW PREFIXED,

*Some Remarks on the Nature and Cure of the
ulcerated Sore Throat.*

BY WILLIAM WITHERING, M.D. F.R.S.

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MDCCXCIII.



OF THE

SCARLET FEVER and ULCERATED
SORE THROAT.

PHYSICIANS are now pretty well agreed, that the Scarlet Fever of SYDENHAM, is a very different disease from that described by our countryman Dr. MORTON in the last, or by Dr. COTTON in the present century: but doubts yet remain whether this last disease, which SAUVAGE has not inaptly called the Scarlatina anginosa, be or be not the same with the Angina gangrænosa or ulcerated Sore Throat of FOTHERGILL and HUXHAM. Each opinion has its abettors, and each may boast the support of very high authority.

OF THE SCARLET FEVER

Early in life I had opportunities of seeing much of the ulcerated Sore Throat, and under the sanction of practitioners, to whom I looked up with deference and respect, I saw it universally treated with port wine, bark, acidulated gargles and antiseptic steams. This mode of practice was not unsuccessful; sooner or later it was very universally adopted, and as the disease never again became so prevalent as I had seen it in my younger days, I felt no inducement to alter the mode of treatment.

In the first edition of this pamphlet it was remarked, that the Scarlet Fever of 1778 “was preceded by some cases of “the ulcerated Sore Throat.” — Upon further examination my notes refer to two families in Birmingham affected by it in the month of February, to two more in April, and to several in and about Hales Owen in the winter and spring. These did well under the established treatment; but in the month of May, when the Scarlet Fever first became a very prevalent epidemic at this place, although the great resemblance of its leading characteristics

induced us to adopt the treatment which long experience had approved in the Angina gangrænosa, with such modifications as the more urgent inflammatory symptoms seemed to require, yet the want of success necessarily determined us to seek for other remedies, and the beneficial consequences resulting from a very different mode of practice, first made me suspect that the two diseases were really distinct.

But in attempting to discriminate them, difficulties occurred which could not fairly be done away; and I was forced to confess that, distinct as they appeared to be in the two extremes, in other points they ran insensibly into each other, so that I found it impossible to draw an exact line between them. Still, however, I was disposed to consider them as distinct diseases, from a conviction that they who had once gone through the Scarlatina anginosa could never be infected by it again; whilst no such exemption operated in favour of such as had suffered from the ulcerated Sore Throat; and an instance was brought

OF THE SCARLET FEVER

forward of the children of Mr. G——t, who had the ulcerated Sore Throat in May, and the Scarlet Fever, &c. in the following August. But I have now reason to believe there was an error in this account, and that the disease in May was apthous; for upon further enquiry it appears, that the gums and inside of the cheeks were affected as well as the throat, and that the remedies applied to the mouth were such as are daily used in apthous cases.

My chief reason, however, for wishing to establish the difference of the two diseases, was the necessity which I then thought indisputable, for the difference in practice. Had it merely rested as an abstract consideration, it would not have occasioned me a moment's anxiety, but under a persuasion that the welfare of the sick depended upon a distinction of the two diseases, I drew up a tabular view, in which I endeavoured to collect the leading symptoms of the ulcerated Sore Throat on one side, and those of the *Scarlatina anginosa* on the other. This table is reprinted without any alteration,

as it is equally useful whether we consider it as exhibiting a contrasted view of two distinct diseases, or only as pointing out the different aspects of the same disease under different circumstances,

Since the year 1778 our epidemic has frequently presented itself to my observation, both in the town of Birmingham, and its neighbourhood, as well as in several parts of the surrounding counties. From the most assiduous attention to the subject ever since that time, from observing it in every difference of season, exposure, age, and temperament, I am now persuaded that the *Scarlatina anginosa* and the *Angina gangrænosa* constitute but one species of disease; that they owe their existence to the same specific contagion; that the varieties in their appearance depend upon contingent circumstances, and that the greatest differences are not greater than those of the distinct and confluent smallpox.

Further observation, aided by the concurrent testimony of many of my colleagues in this place, engaged in extensive practice, confirm me in the opinion that the infection of the *Scarlatina anginosa*, like that of the measles and smallpox, can only be taken once. That it is not generated under any known circumstances like the poison of the Typhus or low fever, but that it is from time to time propagated by contagion, like the other eruptive fevers just now mentioned.

From several publications on the subject by foreign physicians, it appears to have raged with uncommon violence in Denmark, Sweden, and the North of Germany, the year before it became so general in England, and I know that its existence amongst us may be traced from that time to the present.

It is pretty generally believed, that those who have once had the ulcerated Sore Throat, are more liable than others to be seized with it again. This opinion is so incompatible with what has just now been asserted, that it ought not to

be passed over in silence, especially as it was one of the principal grounds on which I had rested my former belief. But to the best of my recollection, the cases which I thought so much in point, were cases of what was usually called a *specked* throat, and from later and more accurate observations made with a particular view to the question, I have been convinced that this kind of secondary disease, viz. the Specked Throat, does occur very frequently in those who have suffered from the ulcerated Sore Throat; but it is not infectious, and except the specks in the throat, it wants every other leading characteristic of the disease.

The mucous membrane lining the throat, is, in many people, liable to smaller or larger specks or sloughs, very different in their nature from those which appear in the ulcerated Sore Throat, but the injury which that membrane sustains from that disease, is probably one of the predisposing causes; and under a strong predisposition, every catarrhal affection seems sufficient to produce them. After the devastation occasioned by the

OF THE SCARLET FEVER

Angina gangrænosa in 1748, and for several succeeding years, the fauces were anxiously inspected by the patient as well as by the practitioner, and the first appearance of a speck or a slough, excited an alarm; bark, port wine, &c. were ordered, and the patients recovered, though probably not quite so soon as they would have done if these remedies had been neglected.

There is yet another feature which seems to indicate an essential difference in the two diseases; I mean the subsequent anasarcaous affections, so common after the febrile state of the Scarlatina anginosa, but rarely succeeding to the ulcerated Sore Throat. If these dropsical appearances are supposed to depend upon the debility consequent to the increased and violent action of the capillary subcutaneous vessels during the eruptive state, or if again upon the morbid affection of the lymphatics from the absorption of the poisonous miasmata, the dropsy should appear after one disease as well as after the other, when the scarlet on the skin had been nearly the same in both.

AND SORE THROAT.

But the fact is, that the scarlet colour of the skin is much more frequent, more constant, and more intense, in one state of the disease than in the other, and whilst in the one the skin is uniformly dry, in the other it is bedewed with sweat towards morning; thus probably expelling a large proportion of the poison which otherwise must have been absorbed.

The practical considerations which so forcibly urged me heretofore to maintain the difference of the two diseases, cannot alone be thought to establish any specific difference. The same specific contagion acting in different circumstances produces the distinct or the confluent smallpox; why then may not the same poisonous matter produce either the *Scarlatina anginosa*, or the ulcerated Sore Throat, according as the seasons and the subjects predispose to inflammation in the former case, or to debility in the latter?

I still allow that some differences in the practice are requisite in these different appearances of the disease, but the experience of several years has now convinced me,

that the old antiseptic treatment of the ulcerated Sore Throat is not the best possible. Soon after the first publication of this work, the late excellent Dr. FOTHERGILL favoured me with the communication of his more mature opinions about the Angina gangrænosa, and mentioned his intention of publishing a new edition of his tract on that subject, as soon as he should get leisure to revise it; but as he did not live to accomplish this design, the reader will thank me for the following sentiments of that able physician:

“ I have long been dissatisfied with
“ the treatment of this disease, and in
“ prescribing bark have rather yielded
“ to the opinions of others than followed
“ the suggestions of my own judgment.”

From so many opportunities of observing the good effects of early, powerful, and repeated vomits in the Scarlatina anginosa, it was natural to expect that the same treatment would be attended with similar advantages in the ulcerated Sore Throat, especially when I became

convinced that both diseases were the offspring of the same specific contagion. The result of this practice, invariably continued for several years past, has been so greatly to the advantage of my patients, that I do not hesitate to recommend it as by far the most efficacious mode of treating the ulcerated Sore Throat, particularly at its commencement. Dr. FOTHERGILL had nearly made the same discovery, for at page 55 of his Treatise, he says, “If we are called in at first, “whilst the sickness or vomiting continues, it will be of use to promote “this discharge, by giving an infusion “of green tea, chamomile flowers, carduus, or a few grains of ipecacuanha. “In some instances *where the attack has “been severe, and this method practised, “the disorder has gone off with more ease “than was at first apprehended.*”—

I find it useful to allow these patients animal food, in whatever form it can best be taken, with wine proportioned to the degree of debility. In the intervals between the emetics, a solution of fixed alkaline salt is useful, given in a decoc-

tion of contrayerva root, or in camphor mixture, adding testaceous powders if there be a tendency to purge ; and well knowing the danger of this tendency, I don't think it safe to allow the use of vegetable acids or acescent fruits. When the fever is pretty well subdued and the danger over, the bark may be given with propriety during the state of convalescence.



Of the Scarlet Fever, and Sore Throat, as it appeared at Birmingham in the Year 1778.

THIS disease appeared in Birmingham about the middle of May, 1778, and in the beginning of June was frequent in many of the towns and villages in the neighbourhood. It was preceded by some cases of the ulcerated Sore Throat, and accompanied in its course through the summer by the chin-cough, the measles, the smallpox, and several instances of the common quinsy.

It continued in all its force and frequency to the end of October, varying however in some of its symptoms as the air grew colder. In the beginning of November it was rarely met with, but towards the middle of that month, the air again becoming warmer, it increased again, and in some measure resumed those appearances which it

possessed in the summer months, but which it had lost during the cold winds in October.

Subjects.

It affected children more than adults; but seldom occurred in the former under two years of age, or in the latter when more than fifty. In children the number of boys and girls that suffered from it was nearly equal, but in adults the number of female patients considerably exceeded that of the male; probably because the former were more employed in attendance upon the sick, and consequently more exposed to the infection.

Mode of attack.

On the first seizure the patients felt an unusual weariness, or inaptitude to motion; a dejection of spirits, and a slight soreness or rather stiffness in the throat; with a sense of tightness in the muscles of the neck and shoulders, as if they were bound with cords. This symptom sometimes became very painful, so that it was difficult to prevail upon the younger patients to throw their heads sufficiently back, to allow of a full inspection of the throat. In a few hours

chilly fits took place, generally alternating with flushing heats; but at length the heat prevailed altogether. The patients now complained of slight headache, and transitory fits of sickness. They passed a restless night, not so much from pain as from want of inclination to sleep.

The next day the soreness in the throat increased, and they found a difficulty in swallowing, but the difficulty seemed less occasioned by the pain excited in the attempt, or by the straitness of the passage, than by an inability to throw the necessary muscles into action. A total disrelish to food took place, and the sickness frequently arose to a vomiting. The breathing was short, and often interrupted by a kind of imperfect sigh. The skin felt hot and dry, but not hard; and the patients experienced frequent, small, pungent pains in different parts of the skin, as if touched with the point of a needle. Towards evening the heat and restlessness increased; the breath became hot and burning to the lips; the patients wished to drink, but the tendency to

Second day.

Third day.

sickness, and the exertions necessary to frequent deglutitions, were so unpleasant, that they seldom cared to drink much at a time. This night was passed with still greater inquietude than the former. In the morning the face, neck, and breast appeared redder than usual; in a few hours this redness became universal, and increased to such a degree of intensity, that the face, body, and limbs, resembled a boiled lobster in colour, and were evidently swollen. Upon pressure the redness vanished, but soon returned again. The skin was smooth to the touch, nor was there the least appearance of pimples or pustules; but now and then a case occurred, with a few circular livid spots interspersed amongst the red colour, particularly on the neck and breast; but this appearance did not portend a more unfavourable termination of the disease. The eyes and nostrils partook more or less of the general redness; and in proportion to the intensity of this colour in the eyes, the tendency to delirium prevailed.

Scarlet colour
vanishes.

Things continued nearly in this state for two or three days longer; the intense

scarlet then gradually abated, a brown colour succeeded, and the skin becoming rough, peeled off in small branny scales. The tumefaction subsided at the same time, and the patients gradually recovered their strength and appetite.

During the whole course of the Fever, the pulse was quick, small and uncommonly feeble. The bowels regular in their discharges. The urine small in quantity, but scarcely differing in appearance from that of a person in health. The submaxillary glands were generally enlarged, and rather painful when pressed upon.

The tongue was red, and moist, at the end and at the sides; but drier in the middle, and more or less covered with a yellowish brown mucus. The velum pendulum palati, the uvula, the tonsils, and the gullet as far as the eye could reach, partook the general redness and tumefaction. I never saw any real ulceration in these parts; but sometimes collections of thick mucus, particularly on the back of the œsophagus,

greatly resembled the specks or sloughs in the ulcerated Sore Throat, but they were easily washed away by the injection of any common gargle.—After the Fever ceased, it was not uncommon to have abscesses form on one or both sides of the neck under the ears, but the matter easily discharged itself through the ruptured teguments, and they healed in a few days, without much trouble.—

Abscesses.

The above is a picture of the disease as it then most usually appeared ; but it too frequently assumed a much more threatening aspect ; for in children, the delirium commenced in a few hours after the first seizure, which was marked by symptoms of extreme debility. The flesh was intensely hot : the scarlet colour appeared on the first or second day, and they died very early on the third.

Dangerous
symptoms in
children.

In others, who survived this rapid termination, when the scarlet colour turned to brown, and their recovery might have been expected, the pulse still remained feeble and quick, the skin became dry and harsh, the mouth parched,

the lips chopped and black ; the tongue hard, dry and dark brown ; the eyes heavy and sunk ; they expressed an aversion to all kinds of food, and extreme uneasiness upon the least motion or disturbance. Thus they lay for several days, nothing seeming to afford them any relief. At length a clear amber coloured matter discharged in great quantities from the nostrils, or the ears, or both, and continued so to discharge for many days. Sometimes this discharge had more the appearance of pus, mixed with mucus. Under these circumstances when the patients did recover, it was very slowly ; but they generally lingered for a month or six weeks from the first attack, and died at length of extreme debility.

In adults, when more violently attacked, the rapidity of the fever, the delirium, &c. was such, that they died upon the fourth or fifth day, especially if a purging supervened. Some survived to the eighth, or to the eleventh day ; in all these the throat was but little affected : the eyes had an uncommon red appear-

In adults.

ance, not that streaky redness which is evidently occasioned by the vessels of the cornea being injected with red blood, but an equable shining redness, resembling that which we may observe in the eye of a ferret. But notwithstanding this morbid appearance in the eye, the strongest light was not offensive. This redness might often be discovered, by lifting up the upper eyelid, some hours before it shewed itself in the part of the eye that is usually visible, and it was of some consequence to attend to this circumstance, as it greatly influenced the event of the case.

These patients were extremely restless, clamorous, and desirous to drink ; but after swallowing one or two mouthfuls, upon taking another, they seemed to forget to swallow, and let it run out at the corners of the mouth ; whilst others spurted it out with considerable force, and were very angry if urged to drink again. In these cases, the scarlet colour appeared very soon after the attack, but in an unsettled irregular manner ; large blotches of red, intermixed with others of white, and these often changing places.

Besides the full scarlet colour described above, there were frequently small circular spots of a livid colour above the breast, the knees, and the elbows. The pulse from the very beginning was so quick, so feeble, and so irregular, that it was hardly possible to count it for half a minute at a time.—It is needless to add, that the greater part of those who laboured under these dreadful symptoms died. A few recovered, and others fell into a state of debility bordering upon ideotism; from which they were at length rescued by time, and generous living.—

Livid spots.

In one patient, a man, the jaw was so perfectly locked upon the third day, that it was impossible to get any thing down his throat; and he died early upon the fifth day. In another man, when the scarlet of the skin was turning brown, several white blisters appeared upon different parts of his hands and feet, which when cut open, contained no liquid; but in a boy who had similar blisters, some of which were cut in a few hours after their appearance, a thin pel-
lucid watery fluid was discharged: and

Particular symptoms.

in this case the scarlet colour of the skin, the second day after its appearance, changed to a dark lead, or rather violet colour. I have been told of three instances, in which the desquamation was so complete, that even the nails separated from the fingers.

Autumnal
appearances.

These were the appearances during the hot months, but in the month of October, when the air became colder, the scarlet colour of the skin was less frequent, and less permanent. Many patients had no appearance of it at all, whilst others, especially adults, had a few very minute red pimples, crowned with white pellucid heads, but these appeared only in the parts where the skin is most tender. The inside of the throat was very considerably tumefied, so as to render deglutition painful and difficult; its colour a dull red, sometimes tending to a livid. This affection of the fauces in some patients seemed to extend down the gullet to the stomach, and was accompanied with painful efforts to vomit, particularly whenever any thing was swallowed: in others it spread itself

down the windpipe to the lungs, as was evident from the cough, the strait breathing, the apprehension of suffocation, and other peripneumonic symptoms. In others again, its progress along the *Eustachian* tube was indicated by sharp pains in the ear. The eyes did not now bear the light, though they had less of that redness described before, but still a slight tinge of it was visible, together with something of the shining watery appearance which is so remarkable in the measles. The patients too complained of a general painful soreness in all their limbs, and not unfrequently of very acute pains in the ancles, knees, wrists and elbows, attended with more or less swelling where the pain was most violent. These swellings had sometimes a reddish shining appearance, very like the gout.

In most of these cases the pulse beat 130 or 140 strokes in a minute; it was small, but yet hard, and sometimes sufficiently so to justify the opening of a vein. The blood thus taken away, in every instance when cool, appeared sisy, and the whole crassamentum firm.

Through the course of the disease, large quantities of viscid mucus, and other matter with much of the purulent appearance, were from time to time discharged from the throat and nostrils.

Some patients threw out several white, or ash coloured sloughs, though no such sloughs were visible upon inspecting the throat; but in most, the fauces, particularly the tonsils, were covered with them, and upon their separation looked raw, as if divested of their outer membrane.

The Fever under this autumnal appearance, generally terminated favourably on the fifth, eighth, or eleventh day, but sometimes was protracted to a much greater length, by the formation of large painful abscesses; and I have been told of several cases that were followed by a numerous succession of boils upon different parts of the body. But no symptom was more troublesome to some individuals, than small ulcerations on the sides, and down towards the root of the tongue, which were so painful as to deprive them of the power to take solid food, even for

several days after the inclination for it had returned.

From a retrospective view of all the cases which I attended at this time, it appears that the fever was of longer duration in adults than in children ; that it was more fatal to men than to boys, and more so to boys than to girls. Out of 139 cases of the worst kind, 33 of the patients were adult females, all of whom recovered. It was particularly fatal to lying in women ; I heard of three only under these circumstances, and they all died ; as likewise did the only two children I saw, who had the scarlet fever and the smallpox, at the same time.



Of the consequential Dropsy.

THE anxiety of the physician, and the danger of the patient, generally cease with the disease which gave rise to them; but this was not the case with the disorder now under consideration, for it often happened, that in ten or fifteen days from the cessation of the Fever, another train of symptoms demanded the attention of the former, and exercised the sufferings of the latter. They felt, after a few days amendment, a something that prevented their further approach to health: an unaccountable languor and debility, together with a stiffness in their limbs, an accelerated pulse, disturbed sleep, disrelish to food, and a paucity of urine.

Dropsy.

These symptoms were soon followed by an universal swelling of the anasarca kind, and sometimes an ascites. In some patients the feverish disposition ran

high, in others it existed only in a moderate degree. In some the dropsy affected the brain, producing coma-vigil, delirium, blindness; with the most enlarged expansion of the iris, which was incapable of contraction in the strongest light. In others, the dropsy affected the lungs, and produced every symptom of the hydrops pectoris. The tongue was dry and brown; the skin harsh; the urine of a deep mahogany colour, small in quantity, and depositing a sediment of a still deeper hue, and in a powdery form.

The urgency of these symptoms, added to the very evident appearance of disease, soon compelled the patients to apply for assistance; and the event, under the mode of treatment hereafter to be described, was almost always favourable.



*Of the Scarlet Fever, as described by Medical
Authors.*

Sydenham's
account.

THE Scarlet Fever, in its simple state, is not a very uncommon disease. SYDENHAM gives us a chapter upon this kind of Scarlet Fever, in which he observes, (*a*) that it generally makes its

(*a*) *Scarlatina febris, licet nullo non tempore possit incidere, ut plurimum tamen exeunte æstivo se prodit, quo quidem integras familias, infantes vero præ cæteris infestat. Rigent, horrentque sub initio ut in alijs febribus, qui hâc afficiuntur, neque vehementer admodum ægrotant: postea cutis universa maculis parvis rubris interstinguitur, crebrioribus certè et multo latioribus, magisque rubentibus, at non perinde uniformibus, ac sunt illæ quæ Morbillos constituunt. Ad duos trèsve dies persistunt hæ maculæ, quibus demum evanescentibus decedentèque subjectâ cuticulâ, restant furfuraceæ quædam squamulæ ad instar farinæ corpori inspersæ, quæ ad secundam aut tertiam vicem se promunt, conduntque vicissim.* - - - - -

- - - - - Satis habeo, ut æger à carnibus in solidum abstineat, et à liquoribus spirituosus quibuscunque, tum ut neque usquam forâs prodeat, neque se perpetim lecto affigat. Cui jam penitus desquamatâ, et cessantibus symptomatis, è re fore existimo

appearance toward the end of summer, that it attacks whole families, but particularly children; that they are seized with chillness and shivering as in other fevers, but without much sickness. Afterwards the whole skin is covered with small red spots, more numerous, much broader, of a fuller red, but less uniform than those of the measles: that they continue two or three days. After they disappear, and the skin is scaled off, a kind of branny scales remain, which fall off, and again appear for two or three times.

He uses no medicines, but thinks it sufficient that the patients abstain from

Requires no medicines.

ut purgetur æger leni aliquo medicamento, ætati atque viribus accommodo. Simplici hâc et naturali planè methodo, hoc morbi *nomen* (vix enim altius assurgit,) sine molestiâ, aut periculo quovis facillimè abigitur. - - -
 - - - Veruntamen hoc animadvertendum volo. Si *convulsiones Epilepticæ* vel etiam *Coma*, huic morbo sub initium eruptionis supervenerint (quod quandoque accidit in pueris ac junioribus hoc morbo laborantibus) omnino oportet ut *Epispasticum* amplum ac forte posteriori cervici applicetur, atque, porro ut *Paregoricum* è Syrupo de Meconio statim exhibeatur, repetendum singulis noctibus usque dum convalescerit; imperando interim ut æger bibat pro potu ordinario lac cum triplo aquæ coctum, et à carnis esu abstineat. Sydenham sect: sexta, Cap. 2.

flesh meats, and from strong liquors; that they keep within doors, but not in bed. After the desquamation of the skin is compleated, he advises a gentle purge. Thus, says he, by this plain and simple method, this disease, (if it deserves the *name* of a disease) departs without trouble or danger.

Uncommon
symptoms.

Afterwards he adds, that sometimes in children or young persons, epileptic convulsions or coma take place in the first stage of the eruption, and then it is necessary to apply a large blister to the neck, to give a dose of diacodion, which must be repeated every night; and to give milk, boiled with thrice its quantity of water, for common drink.

Dover's ac-
count.

Nearly to the same purpose is the account given by DOVER, in his Physician's Legacy, who says, this fever is of a very mild nature, more manageable than that of the measles, and does not stand in need of the assistance of medicine.

Appearance
in Holland.

Equally tractable with this, is the Scarlet Fever that DE GORTER has

observed in Holland. He says it chiefly prevails amongst children; that after three or four days continuation of a slight fever, scarlet blotches appear. That they remain but a short time, vanish insensibly, and leave a kind of branny scales behind them. That previous to the eruption, the patients complain of pains, anxiety, heat, and cough, but that these symptoms are never dangerous. (*b*)

The disease thus described by SYDENHAM and DE GORTER, is by no means uncommon in England, but it differs very much from that which is the subject of these pages. It does not appear to be infectious, and is probably, as DE GORTER

(*b*) *Macularum Scarlatinus color quæ in levi febre oboriuntur; huic morbo dedit nomen. Incipiunt plerumque in tenella ætate, tertio vel quarto die febris levioris; non diu persistunt, insensibiliter evanescunt, relictis in cute quibusdam furfuribus; in facie inchoare solent sensim latiores factæ maculæ. Reliquam etiam interdum tegunt corpus. Levis videtur biliosa corruptio calore antecedentis æstatis in tenella ætate, motu febrili ad cutem pulsa, ubi exarescens materia corpus relinquit sanum.*

Hæc materia ante eruptionem oberrans, generat febrem, calorem, dolorem, anxietatem, tussim, sine periculo. De Gorter *Prax. Med.* Tom. 2, page 196.

Morton's account.

Symptoms.

supposes, occasioned by some irritating matter in the alimentary canal. But our *Scarlatina anginosa* seems undoubtedly to have existed in London, in the summer of the year 1689, with symptoms so violent, that MORTON, who has transmitted us the account of it,* calls it a kind of plague. He does not, in the cases he relates, mention particularly the affection of the throat, but in the eleventh history (page 53) he notices swellings and suppurations of the parotids, producing great difficulty in swallowing, and the discharge of acrid and corrosive matter from the nose, ears, and fauces. In another patient a tumor formed in the left armpit, and suppurated; and a lady had an abscess formed just above the pubis, which became gangrenous. He then mentions in terms of admiration, how much he had observed the tonsils, the uvula, the fauces and the nostrils to have been tumefied; how greatly the lips were sometimes swollen, and covered with sordid scabs and exulcerations. As what is related in this history contains

* Exercitatio tertia. Cap. 5.

the whole of his observations which approach the nearest to our disease, I shall subjoin it in his own words for the satisfaction of the reader. (*c*) But after

(*c*) Ante sexennium mediâ æstate simul decumbebant in domo Domini Hook tres ejus filiæ, filiulus unicus, atque Domina Barnadiston ejus matertera, mätroņa annos septuaginta plus minûs nata. Omnes quasi veneno deleterio perculsi febre, Synochus, unum tenorem servante corripiebantur, Tussi Ferinâ, comate, deliriis, ceterisque malignitatis symptomatis haud obscuris afflicti. Ideoque natura symptomatum id exigente, Alexipharmaca mitiora exhibenda, atque epispastica applicanda jussi. Die autem morbi quarto, quinto, vel sexto, singuli scarlatinam efflorescentiam per cuticulam ubique sparsam perpetiebantur, eamque per septem, octo, vel decem dies protensam. Duæ è filiabus atque filiulus, quarto, vel quinto efflorescentiæ die parotidibus insignibus affligebantur, unde deglutitio adeò præpediebatur ut in præsens vitæ subsidium (inflammatione urgente, et forti arteriarum vibratione adhortante) venam secare et moderatâ manu sanguinem detrahare coactus essem. Alexipharmacorum autem et Vesicatoriorum ope continuatâ, glandulæ parotides (utut venæsectione earum dolor et ardor mitigarentur) debito tempore exulcerabantur, atque apostematis ruptis pus acre et corrosivum per nares, aures et fauces copiosè egerebatur, unde triginta dierum spatio sensim revalscebant. Filia autem natu secunda die tertio vel quarto efflorescentiæ immaniter vociferabatur præ dolore ingente axillam finistram occupante. Quo circa sanguinem è brachio adverso detraxi ad dolorem mitigandum, ex quo dolor allevabatur. Continuatis autem remediis alexipharmacis tumor increvit, buboni non dissimilis, qui tandem exulcer-

The same
with the
measles.

all, this author erroneously considered the Scarlet Fever and the measles to be the same thing. He defines them as such in his synopsis febrium,* and in

atus pus copiosum per plurimos dies effudit, quo demum sanato integram sanitatem formosa ac elegans puellula recuperavit. Verum Domina Barnadiston cùm ad plures dies malè se habuisset, et omnem remediorum usum neglexisset, tandem post sex vel septem dies elapsos carcinomate paulo supra pubem corripiebatur, quod spatio unius vel alterius diei præ virulentia veneni per partem affectam excreti gangrænâ tentabatur. Alexipharmacis autem et epispasticis diligenter adhibitis, et auxiliis chirurgicis peritè applicatis, præter spem adstantium ab hac peste, licet difficulter admôdum evasit, atque postea ad tres annos superfuit. A *Peste* (inquam) evasit, quoniam venenum morbi prædicti, pestilentialis fermenti malignitatem adæquabat; et si quando venenum istiusmodi morbillosum crisi perfectâ per cuticulam propelli haud potest, tanquam venenum pestilentiale glandulas sponte petit narium, faucium, inguinum, &c. easque inflammat et exulcerat, nec non carcinomata, bubones et parotidas excitat. Quantum tonsillas, uvulam, fauces, nares, et quam diu intumuisse vidi! quàm turgida nonnunquam labia! et quam sordidâ scabie obducta et exulcerata ab eâdem causâ animadverti! ut nuperrimè filiolo domini Blaney accidet, qui post efflorescentiam peractam febre, comate, et prædicto symptomate diu affligebatur. Exercit. 3. Cap. 5. P. 53, 54.

* Exercitatio prima. Cap. 2, p. 41.

another place observes (*d*) that notwithstanding this disease has from the general concurrence of physicians obtained a particular name, yet he thinks it to be altogether the same as the measles, differing only in the mode of the eruption; the former being a continued inflammation or redness equally diffused over the whole cuticle, the latter existing in the form of distinct, oblong or angular blotches. (*e*)

So long ago as the beginning of the seventeenth century, SENNERTUS, physician to the Elector of Saxony, observed the Scarlet Fever in its more malignant form, and has given us a pretty good description of it in his chapter upon the

In Saxony.

(*d*) Hunc morbum (utut universali medicorum consensu titulo peculiari donetur) propterea eundem esse cum morbillis censeo, et solo efflorescentiæ modo ab illis distare, &c. Cap. 5, p. 43.

(*e*) Efflorescentiam hanc, interstitiis figurâ diversâ, oblongâ scilicet quadratâ, vel multangulâ præditis variegatam observare est: namque non unâ continuatâ inflammatione seu rubedine, ut in febre scarlatinâ, perfunditur cuticula. Quo criterio duntaxat hæc efflorescentia ab altera quæ febrem scarlatinam comitatur dignoscenda est. Cap. 3, p. 17.

smallpox and measles.* After speaking of the latter, he says, there is yet another variety which he has sometimes, but not very frequently, observed, and that he is in doubt by what name to distinguish it, (*f*) for although it occupies the whole body like an erysipelas, yet the erysipelas

* Sennertus de febris. Lib. 4, Cap. 5.

(*f*) Præter has differentias adhuc alia est, sed rarior quidem quam aliquoties observavi, quo nomine tamen ab aliis discernere, hactenus dubius fui. Etsi enim instar erysipelatis totum ferè corpus prehendat; tamen non vidi quod adultos, quod in erysipellate fieri ferè solet, sed infantes solùm corripit. Malo ergò ad morbillos referre.
 - - - - - Maculæ rubræ et quasi ignitæ cum vix effatu digno tumore per universum corpus quasi quædam parva erysipelata erumpunt in principio, seu morbi die quarto vel quinto. In statu verò universum corpus rubrum et quasi ignitum apparet, ac si universali erysipellate laboraret. In declinatione rubor ille imminui, et maculæ rubræ latæ, ut in principio iterum apparent, quæ tandem septimo vel nono die evanescent, epidermide squamarum instar decidente. Malum verò hoc grave ac periculosum et sæpe lethale est. Nam calor est ferventissimus, sitis inextinguibilis, et plerumque pulmonum (unde tussis excitantur) faucium et aliorum viscerum inflammationes, deliria et alia mala urgent. In declinatione tandem materia ad articulos extremorum transfertur, ac dolorem et ruborem, ut in arthriticis excitat. Cutis squamarum instar decedit, mox pedes ad talos et suras usque intumescunt, hypochondria læduntur, respiratio difficilior

chiefly seizes upon adults, but this disease attacks children only, therefore he rather chooses to refer it to the measles. He then describes it in words to the following effect. “ Upon the fourth or fifth day of the disease, red fiery blotches appear over the whole body, but without any remarkable swelling. In the height of the disease, this fiery redness occupies the whole surface not unlike an universal erysipelas. In the decline, the general redness abates, and broad red blotches again appear as in the beginning. These at length fade upon the seventh or ninth day, and the skin peels off. This disease is severe, dangerous, and frequently fatal; for the heat is extreme, the thirst inextinguishable, and accompanied in most cases with delirium, inflammation of the fauces, of the lungs, and of other viscera. In the decline of the fever, the matter is transferred to the joints of the extre-

Symptoms,

Consequences

redditur, tandèmq̃ abdomen intumescit, ægrique non sine magno labore, et post longum tempus pristinæ sanitati restituuntur, sæpè etiam moriuntur. Sennertus, lib. 4. Cap. 12, p. 190, 191.

“ mities, and there excites redness and
 “ pain resembling the gout. The skin
 “ falls off in scales, and presently after-
 “ wards the feet and legs swell, the
 “ hypochondres are affected, the respir-
 “ ation is rendered more difficult, and
 “ at length the belly swells. These
 “ patients require great care and a
 “ length of time to recover their former
 “ health : but they often die.”

In Poland.

SCHULTZIUS describes the Scarlet Fever and Sore Throat under the name of *purpura epidemia maligna*, as it appeared in Poland in the spring of the year 1664.* He remarks, “ That the winter
 “ was mild and rainy, (g) that the

* *Miscellanea naturæ curiosorum*. Annus 6. 7. Obs. 145. p. 206.

(g) Cum anno 1664 hyems mollis et pluviosa esset, grassabatur apud nos vere primo insequente purpura epidemia maligna, quæ per totam æstatem et autumnum usque in hyemem sæviebat, plurimosque infantes utriusque sexus, et duodecim annum attingentes (nam ultra hanc ætatem vix ascendebat) perimebat. Plerique secundâ die morbi, nonnulli etiam primâ moriebantur; illi solummodò evadebant, qui nulla faucium inflammatione vel tumore œdematoso (variabant enim ista pro diversitate naturarum) infestabantur. Tum omnibus ab isto morbo liberatis, post

“ disease appeared early in the spring,
 “ and continued to rage through the
 “ whole of the summer and autumn, Seasons.
 “ even to the winter following. That
 “ it proved fatal to a great number of
 “ children of each sex, but hardly affected
 “ any that were beyond twelve years of
 “ age.”

He says, “ they mostly died upon
 “ the second day; some upon the first.
 “ Those only survived who had no
 “ inflammation in the throat, and no Symptoms.
 “ œdematous tumour. In those who
 “ recovered, after a copious sweat, the
 “ redness of the skin vanished, and a
 “ desquamation followed. In some a
 “ diarrhœa of one or two days conti-
 “ nuance proved critical. After some
 “ time, especially in the older patients,
 “ the whole body was affected with a Dropsy.

*copiosum sudorem (nonnullis etiam diarrhœa, sed tantum
 unius vel alterius diei critica profuit) squamæ decidebant,
 rubore cutis evanescente. Tandem, præsertim natu
 majoribus, tumor totius corporis, instar leucophlegmatix,
 et infimi ventris sequebatur, qui per aliquot septimana
 miseris molestus erat, sudoreque etiam solvebatur, interdum
 etiam urinâ largius profluente.—Miscell. Lat. cur. ann.
 6. 7. p. 206.*

“ swelling like the leucophlegmacy ;
 “ the belly likewise swelled. These
 “ symptoms continued very troublesome
 “ for several weeks ; they were carried
 “ off by sweating, and sometimes by a
 “ plentiful flow of urine.”

In the medical transactions of Berlin,
 Decad. 1. vol. page 20, we find our
 disease tolerably well characterised in a
 few words. (*b*)

As it appear-
 ed at Berlin.

“ In the Scarlet Fever the patients
 “ are attacked with shiverings, head
 “ ache, nausea ; and a vomiting gene-
 “ rally succeeds. The efflorescence, which

(*b*) Invasit febris scarlatina patientes cum rigoribus,
 cephalalgia, et cardiaca nausea, quam excipiunt, com-
 muniter vomitus ; efflorescit quarto vel quinto die sensim
 atque sensim, post præcedaneam asperam papillarum
 cutanearum elevationem, rubedine per universum corpus a
 capite usque ad calcem, cum cutis aliquali intumescencia,
 ita ut patientum externus aspectus, referat ideam cocti
 cancri. Ista rubedo interiora narium, limbosque et
 angulos oculorum obducit - - - - -
 - - - - versum eptimum diem, sine sudoribus, rubor iste
 fit remissior, cuticulaque inchoat desquamari, et tunc
 maxime, dum morbus declinare videtur, fauces aphthodeo-
 inflammatoria congestione periclitantur. — Acta Med,
 Berol. Decad. 1. vol. p. 20. & seq.

“ is preceded by an elevation of the
 “ papillæ of the skin, occasioning a
 “ roughness, gradually appears upon the
 “ fourth or fifth day, extending itself
 “ over every part of the body, and
 “ accompanied with a degree of intu-
 “ mescence, so that the outward appear-
 “ ance of the patient resembles a lobster
 “ boiled. This red colour spreads over
 “ the edges of the eyelids, the corners
 “ of the eyes, and the inside of the
 “ nostrils. - - - - -
 “ - - About the seventh day, but with-
 “ out any previous sweat, the intense
 “ colour abates, the skin begins to peel
 “ off, and then it is, whilst the disease
 “ seems to be upon the decline, that
 “ the patients are endangered from
 “ congestions about the fauces, accom-
 “ panied with apthous inflammation.”

In the year 1749, Dr. COTTON pub-
 lished observations on a particular kind
 of Scarlet Fever, that lately prevailed in
 and about St. Alban's. This disease
 shewed itself about the end of September
 1748, and his description of it accords
 very well with its autumnal appearance

with us. He considers it as different from the Scarlet Fever of SYDENHAM, and the same as that described by MORTON. This was undoubtedly the same epidemic which Dr. FOTHERGILL called a Sore Throat, attended with ulcers, and which he has so well described as it appeared in London and the parts adjacent in the year 1739, and at intervals for several years afterwards.

In the years 1751, and 1752, Dr. WALL and Dr. HUXHAM described it as existing in their respective neighbourhoods of Worcester and Plymouth. Since that time we have had many other accounts of it by different authors; but as their works are easily procured, and ought to be in the hands of every practitioner, it is unnecessary for me to take up the reader's time with a particular account of them here.

NAVIER published a letter upon the Epidemic diseases of the year 1753, in which he has recorded a history of the Scarlet Fever and Sore Throat, corresponding much nearer to our disease

than any account which we have yet examined.*

He sets out with observing (*i*) that “when the air grew colder, the small- Navier’s account.

* See Plenciz Tractatus de Scarlatina. See also Commentaria de rebus. Part 1, vol. 4, p. 338. The original is published in French, but we have taken the Latin translation as given by Plenciz.

(*i*) Variolis tandem a mediocri orto frigore fere penitus extinctis, tempestate dein paulo mitius facta, alius apparuit epidemicus morbus, variolis longe magis inflammatorius, febris nimirum rubra, scarlatina dicta. Hic morbus per febrem admodum vehementem se manifestavit, quæ animi deliquiis, lassitudinibus spontaneis, capitis fauciumque doloribus deglutationem impredientibus, comitata erat.

Secundo die, et sæpe post viginti quatuor vel triginta horas in toto corpore maculæ rubræ, vivido scarlatino colore, largæ, manus magnitudinem sæpe excedentes figuræ irregularis, et dorsum, pectus, femora et nates sæpe ita tegentes, ut unica tantum esse videretur, apparuerunt. Hæ maculæ quovis fere momento disparentes, se in alia loca erysipelatis more conferre videbantur, in quibus antea non fuerant. Manus easdem tangens, calorem vividam et ardentem præcipue in adultis sentiebat, et cutis ruberrima digito compressa albescens, remotodigito rursus rufescebat.

Pulsus parvus et frequens erat, et respiratio difficilis et intercepta et singultuosa in plurimis esse videbatur. Halituosus vapor e pulmonibus egrediens adeo calidus et

“ pox almost entirely ceased ; upon a
 “ warmer air again prevailing, another
 “ epidemic disease appeared, far more
 “ inflammatory in its nature than the

urens deprehendebatur, ut unusquisque hunc percipiens, faciem ab egro statim avertere cogeretur. Hæc febris, etiam interdum cum manuum et brachiorum inflatione conjuncta fuit, integrasque familias, aut insimul, aut successive invasit — Vidit Cl. Auctor infantes hoc morbo laborantes, quibus prodigiosa leucophlegmatia supervenit. Quidam hac febre laborans et usque ad palpebras leucophlegmaticus, parcissimam brunam urinam reddens, qualem in hac febre sæpissime, imo interdum sanguinolentem secedere afferit Cl. Auctor, præmissis præmittendis ab omnibus symptomatibus vesicatorium applicatione, liberatus fuit.

Quidem ventrem flatibus distentum, et linguam valde siccam, plurimi vero humidam habent. Iis qui emergunt, epidermis, quinto vel sexto die per squamas decedit, quinimo adoloscanti tredecim vel quatuordecim annorum tota manus pedisque cuticula, exceptis unguibus, decedit. - - - - - Nisi ægro flatim in primo morbi impetu succurratur, escharæ gangrænosæ in fundo faucium versus arcus et velum palati superveniant, et hisce ortis pauci emergunt. Hæc gangræna œsophagum asperamque arteriam sæpe ante occupat, quam illam percipere, illique medere queamus. - - - - - Quidam ac febre rubra affecti quarto, vel quinto die eodem modo pereunt, ac si per inflammationem gangrænosam pulmonum suffocati essent. Alii post vehemens delirium morientes, magnam faniei quantitatem per os et nares reddunt, et rubræ antea maculæ, post mortem in quibusdam prorsus

“ smallpox, viz. the Red or Scarlet
 “ Fever. This disease begins with a
 “ most violent Fever, accompanied with
 “ faintings, great weariness, pains of the
 “ head and throat, and a difficulty in
 “ swallowing.

“ On the second day, and frequently
 “ after twenty four or thirty hours, large
 “ red spots, mostly larger than one’s
 “ hand, of a bright scarlet colour, and
 “ irregular in their figure, appear all
 “ over the body, covering the back, the
 “ breast, the thighs and the haunches so
 “ completely, that they are of one con-
 “ tinued scarlet colour. These spots
 “ are disappearing almost every moment,
 “ and like an erysipelas, again appear-
 “ ing in places that they did not occupy
 “ before. They feel of a sharp biting
 “ heat, especially in adults ; and though

violaceæ conspicuuntur. Hæc symptomata vero in infan-
tibus longe minus violentia sunt, remediisque facile cedunt.

- - - - - Infantes, hac febre Scarlatina
 decumbentes, ordinarie ante febrem tussi ferina laborarunt,
 quæ vero cum febre sese imminuit, et cum illa quoque
 evanuit. D. de Navier. In Comment. de rebus. Pars
 prima. Vol. 4. p. 338. Vide etiam Plenciz Tract. de
 Scarlatina.

“ so extremely red, when pressed by
 “ the finger turn white, but the pressure
 “ being removed, they become red again.

“ The pulse is quick and small, the
 “ respiration for the most part difficult,
 “ interrupted, and sobbing. The breath
 “ so hot and burning that whoever feels
 “ it is obliged to turn away his face
 “ from the patient. Sometimes the hands
 “ and arms are swollen.

“ This Fever attacks whole families
 “ either altogether or successively.”

Dropsical
 appearances.

NAVIER observes, that he has seen
 this disease in young children followed
 by a prodigious leucophlegmacy. In one
 case the leucophlegmacy affected even
 the eyelids; the urine was brown and
 very small in quantity, as was generally
 the case; indeed it sometimes appeared
 bloody. This patient was cured by the
 application of blisters, after other neces-
 sary steps had been taken.

In some he says the belly was dis-
 tended, and the tongue very dry, but in
 general it was sufficiently moist.

“ In those who recover, the skin Desquamation
“ scales off upon the fifth or sixth day,
“ and one youth thirteen or fourteen
“ years of age lost the cuticle from his
“ hands and feet entire, excepting only
“ the nails.” - - - - He proceeds to
observe that “ unless the patient be
“ relieved at the first attack of the disease,
“ gangrenous eschars appear at the bot-
“ tom of the fauces towards the velum
“ pendulum palati, and when these take
“ place but few recover. This gangrene
“ frequently seizes upon the œsophagus
“ and the windpipe, before we perceive
“ or endeavour to counteract it. - - - -
“ Some patients die upon the fourth or
“ the fifth day, with the symptoms of
“ suffocation from a gangrenous inflam-
“ mation of the lungs. Others who die
“ violently delirious, discharge a large
“ quantity of sanies from the mouth
“ and nostrils, and the scarlet blotches
“ after death sometimes change to a
“ violet colour. These symptoms in
“ young children are far less violent, and
“ easily yield to remedies.”

In another place NAVIER says, “ it
 “ is not unusual for young children to
 “ have a severe cough before the attack
 “ of the Fever; which becomes less
 “ troublesome when the Fever comes on,
 “ and ceases along with it.”

At Montpe-
 lier.

SAUVAGE, in his *Nosologia Methodica*,*
 amongst other species of the *Scarlatina*,
 mentions the *Scarlatina anginosa* of the
 year 1765. This seems to agree very
 well with our disease. He says that (*k*)
 “ in the summer of that year a Scarlet
 “ Fever prevailed at Montpellier amongst
 “ young children. The whole body
 “ was intensely red, the voice hoarse,
 “ the throat ulcerated, sometimes gan-
 “ grenous.”

Plenciz's ac-
 count.

Dr. PLENCIZ, a very celebrated phy-
 sician at Vienna, in his *Tractatus de*
Scarlatina, has added something to the

* P. 454, Quarto edition.

(*k*) Hac æstate Monspelii viget apud infantes scarla-
 tina, in qua totus truncus intense rubet cum voce rauca,
 et angina ulcerosa, imò in quibusdam gangrænosa. Sau-
 vage Nosol. Meth. Class, 3. G. 8. Sp. 6.

history of the disease. He is the first author who mentions the appearance of white blisters when the desquamation of the skin takes place, and he gives us the best account extant of the dropsical state that succeeds. He thinks the danger to the patients is greater from the dropsy than from the scarlet fever; but that was not the case with us. He takes some pains to investigate the cause of the disease, and is much more diffuse upon the method of cure than any of his predecessors: but these things will come to be noticed in their proper place.

From the description of this disease as it existed at Birmingham, and from the accounts transmitted to us by other authors, the reader will, I hope, be enabled to attain a pretty accurate knowledge of it, notwithstanding its multifarious appearances. It only remains, in order to perfect the history, to relate the appearances found in the body after death; but the only instructive circumstance arising from the few examinations that have been made, is the enlargement of the lymphatic glands in the neck, and

Dissection.

also of the mesenteric glands; thus pointing out the channels through which the contagious matter enters the system, and supporting the positions assumed at page 70, 71—on the three first of which, the most powerful part of the mode of treatment here pointed out, is founded.

The only examination which I find upon record of a subject who died in the secondary stage of the disease, is that made by DORINGIUS (1) a friend to SENNERTUS. He relates the case of a

(1) Ita observavit Cl. D. M. Doringius, ut literis ad me datis scripsit, puerum quendam Uratislaviæ post hunc morbum pedibus, cruribus, scroto, ventro ac facie intumuisse, cum genarum nonnulla ac perpetuoque rubore, febricula irregulari, tussique paucâ, eaque spumosa saltem et pituitosa rejiciebat, difficultate respirandi summa. Hic septimo die antequam moreretur, post summam respirandi difficultatem, ponderis sensum circa pectus, ac stertorem, pulmonis abscessu rupto pus et sanguinem atrum tussi rejecit, et huic septimo ab illo paroxysmo die, cum eadem symptomata redirent, mortuus est. Corpore aperto, tota pectoris cavitas aqua citrina repleta, pulmõesque ambo toti lividi et gangrenosi conspiciebantur, et sinister magnum intus abscessum fovebat. Abdomine aperto innatabant intestina tota simili aqua: omentum prope consumptum videbatur. Hepar quod pro individui ratione portento sæ fuit magnitudinis, sub-pallidum.—Sennertus Lib. 4. Cap. 12. p. 191. Edit. 1650.

boy who survived the first attack of fever, but afterwards “ had swollen feet, “ legs, scrotum, belly, and face; a perpetual flushing in his cheeks, an irregular fever, a cough attended with a frothy pituitous expectoration, and great difficulty in breathing. Seven days before his death, after most laborious and rattling breathing, with a sense of oppression at his chest, upon the breaking of an abscess he coughed up pus and black blood. Seven days afterwards being attacked again with similar symptoms, he died.

“ Upon opening the body the whole “ cavity of the chest was filled with “ yellow water; both lobes of the lungs “ were livid and gangrenous; a large “ abscess was found in the left. The “ cavity of the abdomen was filled with “ a similar watery fluid. The omentum “ nearly wasted. The liver pale in “ colour, and in proportion to the subject, “ of an amazing size.”

Of the Diagnostick Symptoms.

THE Scarlet Fever and Sore Throat is so nearly related to some other fevers of the axanthamatus kind, that it is not always easy to distinguish them, without having an eye to the prevailing epidemic of the season. An attempt, therefore, to point out the characteristic differences, cannot be unacceptable.

Petechial fevers.

In fevers of the *Petechial* kind, the eruption seldom appears before the fourth day ; it consists of distinct spots, regular in their form, and principally occupying the neck, the back, and the loins. But in the *Scarlet* Fever the eruption generally appears about the third day ; consists either of broad blotches or else one continued redness, which spreads over the face and the whole body.

In the fever called *Purpura* the pustules are prominent, keep their colour under pressuse, and never appear early in the disease. Whereas in the Scarlet Fever, the eruption appears early after the attack, is not prominent, but smooth to the touch, and becomes quite white under pressure. These diseases are certainly distinct in themselves, and not mere modifications in the eruption only, though they seem connected by some general cause; for we had several examples of the true *Purpura* at the time the *Scarlatina* prevailed; but I know a gentleman who first had the *Scarlatina*, and shortly afterwards the *Purpura*: now I never yet have seen an instance of the same person having the Scarlet Fever twice, and I believe it to be as great an improbability as a repetition of the smallpox.

Purple fever.

The *Measles* are so nearly allied to the Scarlet Fever, that we find some of the best medical writers have considered them as no way differing, but in the mode of the eruption; the former rising above the skin, and limited in their extent, the

Measles.

latter smooth and universally diffused. But not to mention that the patients who had gone through the measles were equally subject with others to the Scarlatina, we may observe that the teasing cough, the running at the nose, the sneezing, the watery eye; symptoms so predominant in the early state of the former, were never observed to exist in the latter; at least with us. I confess to have met with one case of the Scarlatina in which a troublesome cough arose upon upon the seventh day, and disappeared on the tenth; but in the measles it is a leading symptom, and continues not only during the eruption, but commonly for many days afterwards.

Erysipelas.

The *Erysipelas* may in many circumstances vie with the Scarlatina; but the limited seat of the former, together with its not being contagious, at least in our climate, and the absence of a sore throat, are sufficient to distinguish it from the latter. We may likewise take into the account, that in the most frequent species of the erysipelas, there is a constant oozing of an acrid watery fluid from the

inflamed parts ; which is never the case in the *Scarlatina anginosa*.

I have drawn up a tabular view of the leading symptoms, &c. of our disease in its two states of high inflammation on the one hand, and of prevalent debility on the other. Physicians conversant with the disease, cannot fail to observe its existence in almost every imaginable intermediate state. But though I have prefixed the epithet *putrid* to the right hand column, as contrasted with the word *inflammatory* on the left, I use it merely as a term to which the prevalence of custom has affixed the ideas of certain appearances, without meaning to imply a belief that any thing really and literally putrid can exist in an animated substance.

Scarlatina Anginosa.

Inflammatory State.

Season. Summer—autumn.

Air. Hot—dry.

Places. High—dry—gravelly.

Subjects. Vigorous—both sexes alike—robust in most danger.

Skin. Fullscarlet—smooth—if pimply the pimples white at the top—always dry and hot.

Eyes. Shining, equable, intense redness—rarely watery.

Throat. In summer, tonsils, &c. little tumefied—no sloughs—in autumn more swelled—in teguments separating—sloughs white.

Breath. Very hot, but not foetid.

Voice. In summer natural.

Bowels. Regular at the accession.

Blood. Buffy—firm.

Termination. The 3d, 5th, 8th, or 11th day.

Putrid State.

Season. Spring—winter.

Air. Warm—moist.

Places. Close—low—damp—marshy.

Subjects. Delicate—women and female children—robust adults not in danger.

Skin. Red tinge—pimply—the pimples redder than the interstices—bedewed with sweat towards morn.

Eyes. Inflamed and watery, or sunk and dead.

Throat. Tonsils, &c. considerably swelled and ulcerated—sloughs dark brown.

Breath. Offensive to the patients and their assistants.

Voice. Flat and rattling.

Bowels. Purging at the accession.

Blood. Florid—tender.

Termination. No stated period.

*Of the Causes of the Scarlet Fever and
Sore Throat.*

HOW far the appearance of this disease depends upon the constitution of the air, how far upon the state of our bodies influenced by the productions of the seasons, and how far again upon the concomitant existence of other diseases, are matters that nothing short of the experience of ages can determine. SCHULZIUS observes,† that the winter of the year 1664, in Poland, was mild and rainy; the *Scarlatina Anginosa* appeared early in the following spring, and raged all summer and autumn, even until the winter following. The last winter with us was uncommonly mild; the spring dry and cold; the summer dry, and remarkably hot. In October the air was unusually cold. November was a wet month; the first week cold, the middle

General
causes.

Seasons.

† Loco citato.

of the month warm. The disease began in May; it raged with great violence in June, July, and August; in September the scarlet colour was less intense, and in October the skin was frequently not at all affected, but the Fever in other respects nearly the same, and the complaints in the throat greatly augmented. In the warm weeks of November, the scarlet colour was more frequent again.

—During the months of September, October, and November, the instances of the disease in the town of Birmingham were fewer than in the four preceding months; but during the former part of that period, all the towns and villages in the neighbourhood, and many separate houses, in high, dry, gravelly situations suffered greatly; whilst the inhabitants of wet, low, or sheltered places, either knew not the disease at all, or if they did, it was only in its mildest form.—

Situations.

Diet.

The product of vegetable substances this year was great; indeed it was universally allowed that the crops of almost every kind were greater than they had been for many years past.—It has been already observed, that the smallpox, the measles,

and the hooping cough, were with us the concomitants of the Scarlet Fever; and that it was preceded in the winter and spring, by the ulcerated Sore Throat. NAVIER too remarks* that it succeeded to the smallpox; and MORTON observed it to prevail together with the measles.

Other diseases

As to the immediate cause of this disease, those who are best acquainted with the present imperfect state of knowledge are the least likely to expect a satisfactory answer to such an enquiry. MORTON says (*m*) “ it is a poison defiling
 “ the animal spirits, whose malignity
 “ does not only overwhelm the spirits
 “ in its first attack, but breaks down the
 “ mass of blood by agitation, into an
 “ acrid colluvies, more powerfully than
 “ any other ferment.”—

Morton's opinion.

* Loco citato.

(*m*) Causa morbillorum continens seu immediata est Venenum spiritus inquinans, quod non tantum in primo morbi stadio malignitate suâ spiritus obruit, sed massam sanguinis agitando eam in colluviem acrem, præ cæteris omnibus fermentis colliquefacit. Loc. citat.

Navier's opinion,

NAVIER (*n*) thinks the cause of the *Scarlatina Anginosa* is something acrid, caustic and putrefactive, like that of the measles. He believes that a similar cause produces the sweating sickness, the gangrænous apthæ, the dysentery; and that it is analogous to the distemper amongst the cattle. He endeavours to support this last opinion by observing that when the cattle recover they lose their hair, and their skin peels off; when they die, the viscera are always more or less in a gangrenous state. Hence he concludes, that our disease was communicated by contagion from cattle to mankind. He thinks too it is some how

(*n*) Causam hujus morbi non solum cum illa, quæ sudorem anglicam, aphtham gangrænosam, dysenteriam, &c. excitavit, eandem esse dicit, sed in miasmate, quod cum morbilloso comparat, acri caustica et putrefaciente consistere ipsumque morbum analogiam alere perhibet cum morbo epidemico pecorum. His enim convalescentibus pili et epidermis eodem modo deciderunt, ac hominibus cuticula, et in cadaveribus pecorum apertis semper viscera quædam gangrænosa invenit Cl. Auctor.

Ex pecorum igitur morbo hanc febrem per contagium ortum esse arbitratur, eandemque cum variolis ideoquoque convenire asserit, quia magnus infantum numerus eandem brevi ante vel post variolas habuerit. Plenciz tractat.

connected with the smallpox, because a great number of children had it a little before or a little after the small-pox.

PLENCIZ * attributes the effects to certain animated seminal particles, *Semina animata*, which he thinks are capable of multiplying their kind. He supposes they may be wafted by the winds to considerable distances, or that they may sometimes lie dormant a long time in the body; and thus he accounts for the production of the disease, when it did not previously exist in the neighbourhood.

Plenciz's
opinion.

But whether this disease be caused by animalcula capable of generating their kind, or by certain miasmata which have the property of assimilating other particles of matter to their own nature, by some mode of fermentation hitherto but little understood, there can be no doubt but it is contagious, and perhaps so in a degree nearly equal to the smallpox and measles.

Contagious.

I have repeatedly had occasion to observe, that it is upon the third or fourth

* Tract. de Scarlat. p. 64—68.

First effect.

day after exposure to the contagion, that the patients begin to complain. Its first effect is evidently that of a poison of the sedative kind acting upon the nervous system. Its first seat seems to be the pituitary or *Schneiderian* membrane; every part of which it presently pervades, passing from thence down the œsophagus to the stomach, down the larynx to the lungs, along the *Eustachian* tubes to the ears; from the nose, to the eyes, and to the brain itself.

Scarlet colour.

The redness of the skin does not necessarily imply a determination of the poison to the surface of the body; because we know instances of a similar effect being almost instantaneously produced by certain affections of the stomach. How many people after eating muscles have we not heard of, that have experienced great anxiety, presently followed by a general redness upon the skin; and which again was soon removed by the exhibition of a vomit to discharge the contents of the stomach. Who has not observed the full scarlet flush upon the face after eating herrings, or vinegar;

Affection of the stomach.

after drinking acetous beer or cyder? Can any body suppose that in the one case the offending matter is instantly conveyed to the skin? or that in the other it is carried from thence instantaneously as the contents of the stomach are evacuated?

I know a young lady, to whose constitution oatmeal is so inimical, that in a few minutes after swallowing the smallest quantity, a general scarlet colour, accompanied by a sensible tumefaction, takes place upon her skin.

Mrs. H——, a married lady, experiences similar effects from eating the spawn of a lobster; and I knew a gentleman who had often suffered extremely, from the smallest quantity of sweet almonds inadvertently taken in food or in medicine.

I shall only add further upon this subject, that the effects of acids just now mentioned, like those ascribed to the miasmata of the *Scarlatina Anginosa*, are by far the most remarkable in hot weather.

Prophylactics.

At the time when the disease prevailed here in its fullest force, and every one was alarmed for themselves and their connexions, the best preventive method was anxiously enquired after. Some smoked, some chewed, and others snuffed tobacco: some rubbed their hands and faces with *thieves vinegar*; many wore camphor at the pit of the stomach, and still more swallowed bark and port wine. But those who were much conversant with the disease, had too ample occasion to observe that none of these methods were effectual. Would it not be as reasonable to expect that we may find a substance capable of destroying the activity of the smallpox matter, as that we can hope for one which shall prove a prophylactic to the poison of the Scarlet Fever and Sore Throat?

However vain our hopes may be, built upon such a foundation, yet if my conjecture be true, that the poison first makes its lodgement upon the mucus separated by the pituitary membrane lining the nose and fauces, it will be of some consequence to those who from

their attendance upon the sick, are necessarily exposed to the infection, to hawk up and spit out frequently the mucus that collects in the fauces, and likewise to promote the discharge of that which lodges in the nostrils.

From the same consideration I am led to advise those who having already imbibed the poison, are seized with the first symptoms of the disease, immediately to take an emetic; frequently to wash their fauces with soap leys, largely diluted with water; and to snuff something up the nose that will occasion sneezing. The first and last of these indications are sufficiently obvious; and the other is founded upon the facility with which the caustic fixed alkaly dissolves mucus, and the quality it has of destroying all the peculiar properties of animal matter. If these precautions are attended to, I can venture to assert, from a pretty large experience, that the infection will either be altogether prevented, or else very trifling in its consequences. After the operation of the emetic, I generally direct the patient to go to bed, and drink

E

plentifully of wine whey with spirit of hartshorn.

It is of peculiar importance also to know that the progress of the infection may be stopped by the use of very practicable precautions, such as may be adopted in almost every house. . When it first appeared among us, it often ran through whole families, and in boarding schools particularly it made such havoc, that most of the schools in the town and vicinity of Birmingham were under a necessity of dispersing; and the yet healthy children of many families were sent from home; but this method contributed to spread the infection more widely and more rapidly through the country.

From the time that Dr. HAYGARTH first communicated to me his ideas of stopping the progress of the smallpox, the probability of stopping the progress of the Scarlet Fever by the adoption of similar methods, was too evident to escape the most inattentive observer. The first trials proved successful; and the full

body of evidence elucidated by the clearest reasonings, which appeared soon afterwards from the same masterly hand,* encouraged me to proceed ; and now for several years past I have never thought it necessary either to break up a school, or to disperse a private family. Allotting apartments on separate floors to the sick and to the healthy ; choosing for nurses the older parts of the family, or such as had had the disease heretofore, and prohibiting any near communications between the sick or their attendants, and the healthy, with positive orders instantly to plunge into cold water all the linen, &c. used in the sick chambers, has very universally been found sufficient to check the further progress of the infection. But for more particulars I wish to refer the reader to Dr. HAYGARTH's book.

* See Haygarth's enquiry how to prevent the smallpox. Chester, printed 1784.

Method of Cure.

AMONGST the multiplicity of medical writers, only a few have favoured us with a description of the *Scarlet Fever and Sore Throat* ; and fewer still with the method of cure.

MORTON, considering this and the measles to be the same disease, directs the practice to be the same in both ; and in this he is a much better guide than those who have written more expressly upon the subject. I can believe that the constitutions of the natives in different parts of Europe, will allow of a considerable difference in the method of treatment ; but I am persuaded that those who practice in England with success, will find more occasions to depart from, than to concur with the methods advised by the French and German authors,

Instead of tracing the progressional steps of the disease over again, and pointing out the plan of treatment in every different stage of its course, and under the variously different appearances which it is so ready to adopt ; I believe it will be the shorter way to consider the different remedies which have been proposed ; to point out how far I have found them in actual practice to be useful or detrimental ; and afterwards to subjoin a few cases, the better to illustrate the mode of application.

But preparatory to this, I must beg the attention of the reader to a few principles, which did not derive their origin from any preconceived theory, but from actual observation, aided by a reference to the general laws of the system ; and I am persuaded that those, who after an attentive consideration of the disease, appear to differ from me in these points, will in reality find that difference to consist more in words than in sentiments ; and that this difference is caused by the difficulty of selecting terms untinged by the theories of the schools.

1. The immediate cause of this disease, is a poison of a peculiar kind, communicable by contagion.
2. This poison first takes possession of the mucous membrane lining the fauces and the nose, and either by its action upon the secretory glands, or upon the mucus itself, assimilates that mucus to its own nature.
3. That it is from this beginning, and from this only, that it spreads to the stomach, &c. and at length acts upon the system at large.
4. That its first action upon the living principle, is that of a sedative or debilitating power.
5. That in consequence of certain laws of the nervous system, when the debilitating effects operate upon the *Sensorium commune*, a re-action takes place; and that this re-action is, *cæteris paribus*, proportioned to the debilitating power; except where the latter is sufficiently violent in its

onset to subdue, at once, the living principle.

6. That in consequence of this re-action of the nervous system, the vibratory motion of the capillary blood-vessels dependent thereon, is greatly increased, an unusually large quantity of blood is accumulated in those vessels; the heart and large arteries are deprived of their customary proportion; and hence, though stimulated to more frequent contraction, the pulse must necessarily be feeble.
7. Violent exertions are followed by debility. Upon the cessation of the fever, the capillary vessels which had acted with such unusual violence, are left in a state of extreme debility, and are long in recovering their tone; hence it may be that so many patients afterwards become anasarcaous. But when we recollect that some patients had these dropsical swellings, without any evident previous affection of the skin, we may be induced to look also for some disorder in the system of lymphatic absorbents.

If these positions are true, they will enable us to direct our practice with a tolerable degree of certainty; they will point out the way to further improvements, and they will assist us in judging of the probable success of methods which have been advised, but which we have not dared to adopt. Of this kind is

BLOOD LETTING.

Bleeding.

PLENCIZ and NAVIER advise us to use the lancet. The former in more general practice, but the latter confines it to cases wherein the inflammatory symptoms run very high. (o) He directs to bleed in the arm, but in case of delirium or coma, to open the jugular vein.

(o) Venesection interdum ob vehementiam inflammationis summe necessaria est. Præfert vero venesectionem in brachio, illam enim in pede institutam, varia sæpius exceperunt incommoda, in primis si viscera, quod sæpissime fieri asserit, inflammatione quodam affecta fuerunt. In delirio vero vel comate, jugularem quoque secare curavit. Navier, Comment. de rebus, &c. Pars. I, vol. 4, p. 340.

Our own countryman, MORTON, says, we should not bleed without evident reason ; and Dr. COTTON remarks, that “ however the inflammatory disposition “ of the blood might seemingly call “ for bleeding, the untoward symptoms “ above mentioned seemed either to “ forbid this discharge, or to permit it in “ such small quantities, that little service “ could reasonably be expected from it. “ And in fact I found that bleeding, “ though recourse was had to it at the “ beginning, was very little beneficial “ towards the cure of the fever, though “ often serviceable to the inflamed “ throat.”

Indeed, such was the state of the pulse with us during the hot summer months, that I never saw an instance of blood being taken away : nor would it be easy to conceive with what view the boldest, or the most ignorant practitioner, would have dared to attempt it ; for in those cases where the inflammation upon the surface was very great, the loss of blood could only contribute to the further depletion of the larger vessels, and

thereby increase the debility and faintness which already existed in a most alarming degree ; for the small vessels accumulating the blood, more in consequence of their own action, than from the pulse of the heart, would not be affected by the usual mode of blood letting ; and the extent of the inflammation was much too great to allow us to have recourse to topical bleedings.

Sometimes where the fiery redness of the eyes, and the state of delirium seemed to demand the application of leeches to the temples, I have seen them applied ; but never with any good effect. In one instance, towards the end of summer, where the constant rejection of every thing that was swallowed, even simple water, and the pain in the stomach during the efforts, seemed to indicate an inflammation in that organ, blood was taken away, notwithstanding the feebleness of the pulse. This blood was sizzly. The bleeding was repeated ; but no very evident advantage accrued to the patient. I think therefore we may conclude, that when the scarlet colour upon the skin is

intense, we cannot expect benefit either from topical or general bleedings.

In the autumn, when the scarlet colour of the skin was seldom very intense, and often did not appear at all, the tumefaction of the fauces, was generally much greater, and the pulse considerably more firm. In this case, if the patient was threatened with suffocation, if violent head ache, or if peripneumonic symptoms pointed out the expediency of blood letting, it was sometimes done; but still with less advantage than one would have expected; and similar symptoms in other patients were much more effectually relieved by

VOMITING.

It is very remarkable that neither NAVIER nor PLENCIZ, after having entered more particularly into the method of cure than any other writers, have never so much as mentioned the use of emetics; neither has Dr. COTTON, though he remarks that the disease generally began with sickness and purging. Our

later writers, too, either pass over the use of emetics, or only mention giving a vomit at the commencement of the disease, as is customary in other febrile complaints, but without seeming to be aware that the speediness of the cure and the safety of the patient depend so much upon their early and repeated exhibition. *

Vomiting.

Vomiting seems to be the remedy of nature : it stands foremost in her efforts to throw off the cause of the disease : it most amply fulfils the indications arising both from a consideration of the cause, and of the effects. If we want to dislodge a poison from the fauces, and the mucous membrane of the nose, and to prevent its descent to the stomach, how shall we do it so effectually as by emetics? If the poison already acting upon the nervous system, destroys the equilibrium of the circulating powers, how can we so readily restore that equilibrium as by emetics? Does not the experience of

* I have lately been informed that the physicians in Germany have now very generally adopted the practice of giving powerful and repeated vomits.

every day confirm their efficacy in a variety of disorders dependent upon local congestions ?

But not to proceed further with questions which cannot fail to be answered in the affirmative, I will venture to assert, that the liberal use of emetics is the true foundation for successful practice in the Scarlet Fever and Sore Throat.

In the very first attack, a vomit seldom fails to remove the disease at once — if the poison has begun to exert its effects upon the nervous system, emetics stop its further progress, and the patients quickly recover. If it has proceeded still further, and occasioned that amazing action in the capillaries, which exists when the scarlet colour of the skin takes place, vomiting never fails to procure a respite to the anxiety, the faintness, the delirium.

In autumn, when the throat was more affected ; when the tumefaction of the fauces was such, that the patients could not swallow but with the utmost difficulty ; when the peripneumoni :

symptoms threatened suffocation, and bleeding was ineffectual, an emetic opened the gullet, and unloaded the lungs, so that deglutition became easy, and respiration free.

Strong vomits.

But it is necessary to add, that a vomit only sufficiently strong to evacuate the contents of the stomach, is by no means adequate to these effects. The vomit must be powerful, and in ordinary cases repeated once in forty eight hours. In those with more urgent symptoms, daily; and in the worst cases twice or thrice in twenty four hours. The patients never fail to express the relief they find after the operation, and the physician soon discovers it in the countenance and in the pulse. As to the form of the emetic, the practitioner may vary it as he pleases; but I generally combine *tartar emetic* in solution with *ipecacuanha* in powder, that I may be more certain of their full effect on the stomach, and avoid the danger of their acting as a purgative. I also give them in much larger doses

than usual, in order to secure a certain violence of action upon the system. (*p*)

PURGING.

I consider the action of purgatives as altogether repugnant to the curative indications in this disease. If the poison

(*p*) In the true quinsy, or *angina inflammatoria*, I have used emetics for many years past with the greatest success. If a vomit be given the first or second day of the disease, and the patient kept in bed a few hours afterwards, drinking gruel freely, and taking tartar emetic in smaller doses to promote perspiration, he rises perfectly cured. If the inflammation has proceeded to such a length as to prevent deglutition altogether, a little tartar emetic repeatedly put far back upon the tongue, and suffered to dissolve there, will in time excite a vomiting. After the first discharge from the stomach, the patient will be able to swallow a large draught of gruel, and thus to continue the operation. The most urgent symptoms are instantaneously relieved, and in a day or two, sometimes with, and sometimes without repeating the emetic, the cure is effected. If the inflammatory process has so far been suffered to proceed, that matter is already formed; vomiting promotes the rupture of the abscess, and dispels the surrounding inflammation. There may be cases in which bleeding is absolutely necessary, but I never yet have met with them; nor do I find it necessary to direct any other medicine either internal or external, except an injected gargle to promote the discharge of the viscid mucus.

Purging.

Purging suddenly fatal.

be received into the system in the manner I suspect; the operation of a purge, instead of discharging it, can only promote its diffusion along the alimentary canal — but waving that consideration, let us enquire what benefit can be expected from purgatives. Their most obvious operation is the emptying of the intestines, and thereby lessening the tension of the abdominal muscles. But we have shewn that the anxiety, the debility, the faintness, are in a great measure owing to the want of fulness in the larger blood vessels; and a want of pressure upon them will produce the same effects. Hence the necessity of bandage when we hastily remove the water in an ascites. Through the whole course of the disease, the belly is in general very regular in its discharges; but if a purging spontaneously supervenes, the patients sink so amazingly fast, that it is not within the reach of art to support them. I have known a person so little indisposed as to dine below stairs one day, and yet, upon a purging supervening, to die before the next day noon. SAUVAGE, after a vomit, advises purges;

but he adds that the patients very often died; and Dr. COTTON says, “if the fever ran high and the body was very costive, I ordered an emollient clyster” —but adds, “that the observations made on bleeding held true likewise here; for the usual weakness of the patient, and depression of spirits, seemed to hint, that these intestinal discharges were the less necessary.” —

SUDORIFICS. CORDIALS. ALEXIPHARMICS. The medicines generally signified by these denominations have but little to do in the cure of the *Scarlatina anginosa*. The patients are not disposed to sweat when the scarlet colour prevails upon the skin, nor do I know of any safe method by which we could attempt to excite a diaphoresis, even if we should expect it to be advantageous. Under the autumnal appearance, when the skin had none of the scarlet colour, a warm bed, and warm diluents would easily induce a moisture upon it, but I never saw any very evident advantage to be the consequence.

Sweating.

CORDIALS

Cordials
hurtful.

Seem to be indicated by the great loss of strength and the feeble pulse ; but they who are aware of the true cause of this debility, will not readily be induced to give them. I have known them given, but the certain consequence was an increase of the restlessness, of the delirium, and of the heat. MORTON advises the mild alexipharmis, by which he means distilled waters and compound powder of contrayerva. Having observed the mild and gentle stimulating effects of the contrayerva to be particularly grateful to the fauces, I have in many instances used it, and mostly in conjunction with testaceous powders, which sit easy on the stomach, and counteract the tendency to purging ; the *camphor* julep too, gives nearly the same pleasing sensation to the throat.

DIURETICS.

Diuretics
beneficial.

This also is a mode of relief altogether unnoticed by writers on this disease ; and yet, next to emetics, is the most to

be depended upon in its cure. Some of the first cases I saw were cases of the most fatal tendency. Amongst other remedies I gave the *seneka root*; and frequently with advantage. But I soon had occasion to remark, that it procured relief only when it occasioned a copious flow of urine. This led me to the trial of other diuretics: but out of the numerous articles which are enumerated under that title, the selection was difficult. *Vegetable acids* were neither pleasing to the palate nor grateful to the stomach; and their effects upon the bowels made me fear to use them. The *vitriolic acid* bade fair to assist us in several points of view, but upon repeated trials it frequently deceived my expectations, though in a few cases it was grateful to the patient, and acted freely as a diuretic. *Neutral salts* did no better; indeed I did not venture to push them far, after observing that the common *saline draught* was but too apt to purge; and even in those cases where it could be used freely without that effect, the patients never seemed the better for it. The acrid vegetable diuretics, such as *squills*, were

likely to be too offensive to the stomach. In this situation it was, that some analagous reasonings, confirmed by the experience of a very sensible apothecary to whom I mentioned the subject, first directed me to the use of the *vegetable fixed alkaly*. Of this I contrive to give a small quantity in almost every thing the patient drinks, so as to get down one or two drams every twenty four hours. The *volatile alkaly* may likewise be given with advantage, but it is difficult to get a sufficient quantity of it swallowed. Tincture of Cantharides was often given with the best effects, to the amount of 150 or 200 drops in twenty four hours.

ANTISEPTICS.

Acids have been noticed under the article of diuretics, and wine is included under that of cordials, therefore we proceed to the consideration of *Peruvian bark*, *fixable air*, and the *dulcified mineral acids*.

Peruvian
bark.

No medicine ever had a fairer or fuller trial in any disease, than the bark

had in our epidemic. At its commencement, the great prostration of strength, the feeble pulse, and the sharp heat upon the skin, with here and there a livid spot, were thought to be such undeniable evidences of the putrid tendency of the disease, and of the broken texture of the blood, that the bark was poured down with a most unsparing hand. And again in the autumn the increased disease in the throat, and the sloughed appearance of the tonsils, conspired to keep up the delusion. It was very generally believed that bark was the only medicine that could be depended upon, and men had not yet forgotten, how many lives were lost in the first attacks of the ulcerated Sore Throat, until Dr. FOTHERGILL and Dr. WALL taught us to withhold the lancet and the purge, and to depend upon cordials and bark.

We have already remarked that it is not an easy matter to distinguish between the ulcerated Sore Throat, and the Scarlet Fever and Sore Throat, notwithstanding the two diseases require such a very different mode of treatment.

The heat of the skin, the prostration of strength, and the feeble pulse have been considered before; it remains to observe relative to the livid spots and the sloughed tonsils, that the former only appeared where the cutaneous inflammation ran to its highest state, and were most probably owing to the effused contents of a ruptured capillary blood vessel: the latter were likewise the consequence of a very high degree of inflammation, which was often kept up by an improper use of the bark and cordials. In some instances the inflammation attendant upon the disease was in itself sufficient to produce the sloughs, but they were generally the consequence of negligent or improper management; for if the patient from the beginning be treated upon the plan I have advised, the sloughs either never appear, or if they do appear, they never increase;—and in twenty four hours vanish altogether. But when that inflammation was still further augmented by large and frequent doses of bark, it was astonishing to see how much the tumefaction increased, and how rapidly the whole lining of the fauces was con-

Does harm.

verted into a stinking slough. It is true, nevertheless, that many patients recovered who took bark. The fact seems to be, that in mild cases an improper mode of treatment is not highly detrimental : it is only in the more dangerous states of the disease that we can do much good or much harm. And I am ready to confess that in two or three of the first bad cases I saw, misled by so many marks of putrescency, I gave the bark ; but the consequences were not such as could justify a continuation of its use.

PLENCIZ * takes a good deal of pains to persuade us to the use of the bark ; notwithstanding his general plan is that of the antiphlogistic kind ; but he says that bleeding ought to be premised. At the end of his book he gives us seventeen histories, six of which seem to be instances of the simple Scarlet Fever of Sydenham ; two of the dropsy consequent to our epidemic, and nine of the true epidemic fever. To only one of these he gave the bark, and that patient died. MORTON

* Tract. de Scarlatina, p. 103.

met with some cases in which the fever intermitted, and then the bark was thrown in successfully.

Fixable air.

Finding that no advantage was to be expected from the bark, recourse was had to *fixable air*, which I had often used in fevers where circumstances forbade the use of bark; its sedative and antiseptic properties were well established, and I expected to turn them to good account. But I was not at that time sufficiently acquainted with the nature of the disease. Fixable air therefore was used, but it seemed to do neither good nor harm.

Dulcified acids.

The dulcified mineral acids in small quantities produced no advantage; given more freely they increased the heat and inflammation. Bottled small beer and cyder were frequently asked for by the patients, and the first or second time swallowed with great avidity; but they soon disliked them, and even the attendants could not fail to remark the increase of heat and restlessness that they occasioned.

OPIATES.

In case of great inquietude and restlessness, both NAVIER and PLENCIZ advise to give opium in small doses; but I never saw it effect the purpose for which it was given; on the contrary it visibly increased the distress of the patient. The experience of Dr. COTTON confirms my observations, for he tells us that “Opiates had no beneficial influences to remove watchfulness — not even when the fever was in a great part, or altogether gone off.”

Opium.

BLISTERS,

In the summer appearance of the disease, were universally detrimental; they never failed to hasten the delirium, and if the case was one of the worst kind, they too often confirmed its fatal tendency. But when the pulse was so feeble that the nicest finger could hardly count its strokes for a quarter of a minute together; when the oppression and anxiety of the patient was such as words can but ill

Blisters.

describe ; when the physician expected that a few hours more would annihilate a life already sunk to so low an ebb, and when the friends would perhaps censure him if he forbore to try the efficacy of an application so universally, and I may add, so indiscriminately used ; it was not easy to resist their importunities under such pressing and distressful circumstances.

Hurtful.

But to avoid a detail that would carry me too great a length, suffice it to say, that after frequent opportunities of observing the events of cases in other respects similar, the blistered patients very often died, whilst those who were not blistered never failed to recover, if properly treated in other respects. In the time of our immediate predecessors, a fever and a blister seemed to be almost inseparable ideas, accordingly we find Dr. COTTON prescribing them very freely, yet he confesses “ that oftentimes no good effect
“ accrued hereby to the fever”—and that
“ a few who had blisters timely applied,
“ and nevertheless a subsequent deli-
“ rium was not prevented.” But it is

easy to see from the whole of what he says on this subject, that he applied them rather to avoid the imputation of imprudence, than from any good he observed to attend their use.

In the autumnal season, when the inflammation was less generally diffused through the body, blisters were less detrimental. If the brain was affected soon after the attack they did much mischief even then ; but if the inflammation was pretty much confined to the fauces, a blister was frequently applied round the throat, though with less advantage than the practice in quinsies, and other local inflammations would teach one to expect.

GARGLES.

In the summer the affection of the throat was frequently so trifling as not to demand any particular attention ; but when the inflammation and swelling in the fauces became a principal cause of complaint, the use of gargles was very grateful to the patient. A decoction of contrayerva sweetened with oxymel of

Injected gargles.

squills, was what I have most frequently used ; sometimes barley water acidulated with the marine acid ; and sometimes the tincture of roses. When these gargles were pretty forcibly injected by means of a large pewter syringe with a long pipe to reach over the tongue, it was amazing to see the quantity of viscid ropy stuff that was discharged, both from the fauces and nostrils. When there is a great disposition to the formation of sloughs in the throat, NAVIER advises (*q*) to gargle with a mixture of highly rectified spirits of wine camphorated, and oxymel ; which he says never fails to stop the progress of the gangrene. I am inclined to believe it is a good application, but have never had occasion to try it. After the fever abates, SAUVAGE uses a gargle of lime water sweetened with honey.

(*q*) - - - - Progressum vero hujus internæ gangrenæ quam certissime impedit gargarisma ex oxymelle cum adjecto spirita vini camphorato, qui vero Hoffmanni methodo sala alcali præparatus esse debet, ne aquosis mixtus lactescat. Navier in loc. citat.

POULTICES.

Cataplasms of different kinds were applied round the neck, but I cannot add with any particular advantage. Upon the whole, I think, the less additional covering was made to the throat the better.

WARM BATHING.

The immersion of the feet and legs in warm water, though sufficient to procure sleep and abate delirium in several kinds of fever, was not attended with any such desirable effects in this; nor did I ever perceive it to do harm. In cold weather, when there was no inflammation upon the skin, and the legs and feet were cold, it rendered the patient more comfortable; and I am much inclined to believe that in the greatest degree of efflorescence which Tepid bath. existed in the summer months, the use of a tepid bath would have been productive of the happiest effects: but this is a matter of opinion only.

TEMPERATURE.

In the heat of summer it was hardly possible to keep the patients sufficiently cool. A mattress to lie upon was found preferable to a feather bed, with the lightest covering for the body, and a free circulation of air. Patients that could sit up, were allowed only to lie down occasionally, and those whose strength would admit of it, were ordered frequently out of doors. This method a little modified, did very well through the warmer part of autumn; but when the winter cold took place, it was necessary to keep them more in bed, and in a room moderately warmed. In two families which I was desired to visit in the year 1790, the doors and windows had been anxiously kept open in very cold weather, thin bedclothes directed, and fires prohibited. Both children and adults who were seized by the infection had the disease in its worst forms, though in other respects the treatment had not been much amiss. Some of the children died, nor did the exposure to cold and wind

prevent the spread of the infection. From the time that moderate warmth was allowed, things took a more favourable turn, the sick recovered, and the healthy remained well.

But it is not only during the existence of the feverish symptoms that the patient should be kept in a temperate warmth, the convalescent state demands also an attention to this point. Too much exposure to cold air prolongs the debility of the patient, often giving rise to other subsequent disorders. I have observed the same things to happen after the measles, when exposure to cold air has been enjoined or allowed. It is obvious that this error must have arisen from the good effects of free exposure in the smallpox, but experience having demonstrated the mistaken analogy, a further perseverance must be held inexcusable.

DIET.

Those who were only slightly indisposed were kept pretty much from

animal food, and fermented liquors. Those in a worse situation were allowed tea, coffee, chocolate, milk and water, gruel, barley water, &c. and occasionally weak wine whey, or nitre whey. But nothing was more acceptable than a full draught of water fresh drawn from the spring. In this the patients were indulged during every exacerbation of heat, restlessness, or delirium, and it seldom failed to procure a temporary abatement of these distressing symptoms.* Of late years I have freely allowed animal food when the patients felt an inclination for it. They generally wish to have cold meat, and I have been surprised to see with what pleasure they would eat cold chicken, at a time when the degree of fever and sore throat would make one suppose, that the one would preclude the inclination, and the other the power of taking such kind of diet.

When the fever ceased, I generally gave a dose of calomel, and worked it off the next day with Rochelle salts, or some

* See the preceding note on the good effect of cold water externally applied.

other mild purgative. If the nights were still passed with watchfulness, opiates were directed; and in the day time bark, with small doses of salt of steel. If the debility was considerable, wine was allowed rather liberally; but nothing afforded such immediate relief as the application of blisters.

G



Treatment in the Dropsical State.

WHETHER the anasarçous appearances are necessary consequences of the Scarlet Fever and Sore Throat, in bodies particularly predisposed to become dropsical; or whether they are the result of negligent or improper management; whether they depend upon the languid action consequent to the great excitation of the subcutaneous vessels, or whether they are to be attributed to the lymphatic absorbents being affected by the poison of the disease, I will not take upon me to determine: but it may be worth observation, that I have rarely met with an instance of a patient becoming dropsical, who had been treated, during the fever, according to the method advised in the preceding pages.

When called upon to visit patients in this situation, I commonly began with

giving calomel at night, and a mild purgative in the morning.

If a febrile pulse attended the other symptoms, an emetic was useful; as were also the saline draughts and other neutral diuretic salts. In cases of great debility, with camatose, or peripneumonic symptoms, large and repeated blisters were of infinite service: but in the more common cases, when the dropsical symptoms were the principal cause of complaint; small doses of calomel and rhubarb occasionally, to keep the bowels open; dilute solutions of fixed alkaly; squills; Seltzer water; and other diuretics in daily use, were adapted to the disposition and temperament of the patient. In some cases that resisted the usual remedies, a single grain of Pulv. fol. Digitalis given twice, or at most thrice a day, until its effects became evident, soon effected a cure in a manner highly pleasing to the patient, for it is never necessary to push its doses so far as to occasion nausea, or to produce any other kind of disorder in the system. When the urine flowed freely, steel and

other tonics were employed ; and the recovery was greatly promoted by gentle exercise, high seasoned food, wine, and the wearing of flannel in contact with the skin.

I cannot conclude this subject without noticing a remedy strongly recommended by PLENCIZ ;* but not having had occasion to try it, the reader must depend upon his account of it.

R. Rhei electi

Spiritus salis coagulati āā drachmas duas

Mercurii dulcis

Auri fulminantis

*Extracti scillæ āā drachmam dimidiam m. fiant
pilul. c. rob juniperi, pondere unius alteriusve grani.*

In the exhibition of this medicine the following precautions are to be observed.

* Tractatus de Scarlatina. p. 121.

(q) *Firstly*. One or two of these pills are to be given every second or third hour; according to the age and strength of the patient. This quantity ought to

(q) *Primo*, Quod una alterave harum pilularum omni bihorio, aut trihorio, pro diversa ætatis aliorumque circumstantiarum, ratione exhiberi, debeat, quam dosim tres quatuorve sedes quotidie sequi debent, quæ si non succedant, tunc vel earum dosis augeri debet, vel prædictis pilulis magisterium mecoacanæ, aut diagridium sulphuratum, aut pilulæ Cochixæ addi possunt. Qua ratione dein salivatio impediatur. Quare.

Secundo, Ut eo certius salivatio impediatur; debet æger post assumptas pilulas bibere calide aliquot uncias infusi baccarum juniperi, aut decocti radicum graminis. Item.

Tertio, Postquam bidui aut tridui his pilulis usus fuerit, debet ab earum usu una, alterove die abstinere.

Quarto, Si ab usu hujus remedii nimix turbæ in corpore concitari videantur, poterunt tales sopiri remediis paregoricis.

Tandem si in his, aliisque similibus affectibus notabilis febris adsit, debemus ab usu hujus remedii abstinere, quia timendum est, ne exinde febris augeatur. - - - - -
- - - ab usu prædicti remedii intra unam alteramve diem ingens copia seri, tam per urinas quam per alvum evacuari solet. - - - - - Adeoque non tantum in cachexia, leucophlegmatia, et hydrope, sed et in contumacissima alvi et urinæ obstructione, si inflammatio aberat, illud in usum vocabatur.

procure three or four stools every day : but if it fail to do that, either the dose must be increased, or some purgative, such as extract of jallap, sulphurated scammony, or aloetic pill with scammony, must be added : by this means a salivation will be prevented. But

Secondly, the more effectually to prevent a salivation, the patient after each dose of the pills ought to drink some ounces of tea prepared with juniper berries, or a decoction of grass roots, warm.

Thirdly. After taking these pills for two or three days, they must be omitted a day or two.

Fourthly. If the use of this medicine occasion too much disturbance in the habit, opiates will be proper, and if much feverish disposition prevails it must not

Item, In catarrho suffocativo, in asthmate humeroso, ubi chermes minerale, sulphur antimonii tartarisatum, scilla, gummi ammoniacum, aliaque, alias efficacissima remedia, inertio erant, aurum fulminans cum uno alterove grano mercurii dulcis, præsentaneum erat remedium. Plenciz. Tractatus 3. p. 124.

be employed. - - - - - Within a day or two after the use of this remedy, there is generally a copious discharge of water both by urine and stool. - - - - - It is not only in cachectic, leucophlegmatic, and dropsical cases that this remedy is useful; but in the most obstinate alvine and urinary obstructions; provided they are not accompanied with inflammation.

So likewise in the suffocating catarrh, and in the humoral asthma, where chermes mineral, tartarised sulphur of antimony, squill, gum ammoniac, and other, even the most powerful remedies, produce no good effect, the *aurum fulminans*, with a grain or two of calomel, affords an immediate relief.

He further adds that this medicine was a secret of Dr. WEBER's, of Furnberg, who used it with great success in a variety of obstinate chronical diseases.

CASE I.

The summer appearance of the disease—The inutility of the bark at its commencement—Infection communicated.

A young lady 12 years of age, was suddenly seized in the evening with weariness, sickness, sore throat, and head ache. A vomit was given the following day, and afterwards the bark. The third day the nausea still continuing, and the strength being greatly impaired, the vomit was repeated, the bark continued, and port wine negus directed for common drink.

The fourth day at noon I first was called in, and found her delirious, with a considerable degree of stupor. Her eyes of a fiery redness, her lips parched, her skin universally tumefied, of a full scarlet colour, and almost intolerably

hot. Her tongue dry; her throat the colour of her skin; her respiration quick, short, and sobbing; her pulse so rapid, so feeble, and so unsteady, as not to be counted.

I directed a vomit to be given immediately; (r) a large blister to be applied between the shoulders; an alkaline solution (s) to be put into a quart of white wine whey, and the whole to be taken in 24 hours.

Fifth day. Her condition nearly the same. Had no stool; urine small in quantity. The alkaline solution was continued; four grains of seneka root were given every four hours, and ten grains of James's powder at night. The weather being very hot, the doors and windows of the room were constantly kept open, and as much cold water as

(r) R. Rad. Ipecac. Gr. vi.

Tart. Emet. Gr. i. M. f. pulv.

(s) R. Sal Absinthii ℥ ii.

—vol. ammon. ℥ss.

Aquæ fontan. ℥ ii. M. f. solut.

she would drink was allowed every time she became more restless and delirious than usual.

Sixth day. Urine more plentiful. Her pulse could now be counted pretty certainly at 140 strokes in a minute. She had one stool in the night. Two blisters were applied to her legs, and a spoonful or two of a vomiting mixture (*t*) directed to be taken every four hours, or so as to keep up a pretty constant nausea.

Seventh day. Passed a better night. Pulse 125. Eyes less fiery; stupor abated, and she could answer sensibly to two or three successive questions. The vomiting mixture was repeated.

Eighth day. Got some sound sleep for the first time. The heat and redness of the skin considerably abated. Pulse

(*t*) R. Tart. emet. Gr. iii.

Vini Ipecac. ʒ vi.

Cretæ ppt. ʒ ii.

Aq. fontan. ʒ vi.

Syr. e Cort. Aurant. ʒss M.

90: steady and sufficiently strong. Begins to call for food. As her belly had all along been rather costive, the following powder was directed. (*u*)

Ninth day. The feverish symptoms entirely gone. The skin peeling off. Urine plentiful, and depositing a farinaceous sediment. The following powder was ordered to be taken thrice every day. (*x*)

In a few days she was carried out, and by the assistance of bark and steel soon recovered her accustomed health; but not without the loss of her hair.

REMARKS.

The imminent danger that this young lady appeared to be in, occasioned the blisters to be directed; and I had not at that time seen so much

(*u*) R. Sal. Polychrest. ʒiſs.

Rad. Rhei. ʒ i.

Calomel. pp^r. Gr. iii. M. f. pulv. statim sumend.

(*x*) R. Cort. Peruv. subtiliss. pulv. ʒ i.

Rad. Contrayerv. Gr. x. M. f. p.

of the disease as could enable me to decide with precision against their use. Fortunately for the patient, they never rose at all. She was evidently better after every vomiting, and after every draught of cold water. She was very desirous one day of bottled perry: it was allowed her, diluted with water; but an increase of her restlessness, heat, and short breathing was so evident to those who had the care of her, that they soon refused to give it her. The fauces were never sloughed, nor much tumefied.—One of the nurses was soon afterwards seized with the same complaints, but by an early application of nearly the same remedies she presently recovered.

C A S E II.

The efficacy of repeated vomits.

Mr. S——, a strong man, about 34 years of age, was seized with the usual symptoms of the worst kind of Scarlet Fever and Sore Throat. On the evening of the first day of the disease he called

upon his apothecary, who gave him an emetic. The second day diuretics were prescribed, a gargle to his throat, a blister to his back; and in the evening the vomit was repeated. Vomiting being observed to be followed by a remission of the symptoms, he took two vomits upon the third day, and expressed himself relieved after each. Upon the fourth day I first saw him, and found him with a very quick feeble pulse, a skin universally scarlet and tumefied, exceedingly hot, breathing short; throat still sore; eyes red, great restlessness and delirium. A strong vomit was immediately prescribed, some powders composed of contrayerva and camphor, (y) and a diuretic solution.

He passed a restless night, but the fever abated the following day, and

(y) R. Rad. contrayerv fult. pulv. Gr. xv.

Camphor. Gr. v. M. f. pulv. secundis vel tertiis horis sumend.

R. Sal. absinthii ʒ ii.

----- vol. Ammon. ʒ i.

Aquæ fontan. ʒ i. f. solut. in lib. ii. Seri vinosi commiscend, et bibat æger liberaliter liquoris,

ceased in a few hours afterwards ; his skin peeled off, and in a short time he recovered perfectly.

REMARKS.

This was one of those cases in which the violence of the attack and the rapidity of the symptoms threatened the greatest danger. The alleviation of the distress of the patient after every vomit, was a proof of the propriety of that mode of treatment ; but the quick recurrence of disagreeable symptoms argued the fatal tendency of the disease. The blister was not applied, and to the omission of that I attribute the safety of the patient ; for where the violence of the inflammation can but barely be counterbalanced by the means we can command, the additional stimulus of a blister is surely sufficient to destroy the equilibrium.

C A S E III.

Eruption of a livid colour—Watery vesications.

A boy fifteen years of age, at a boarding school about six miles from this place, was seized on Monday the 26th of October, with giddiness, sickness, and vomiting. He continued to play with his school fellows till the urgency of the sickness prevented him. He was cold and hot by fits; he was weary; he complained of head ache, and a slight soreness in his throat.

Second day. The symptoms continued, with the addition of prickling and itching in his skin, which turned red where he scratched it. This day he took an emetic by the advice of his apothecary.

Third day. He was brought in a chaise to Birmingham.

Fourth day. I saw him, when he complained of great head ache, sickness at times, and unusual weariness. The

whole of his skin was of a deep violet colour tending towards blackness. His tongue moist, of a whitish brown. Lips dry and parched. Throat nearly the colour of his skin, tumefied but not ulcerated or sloughed. Eyes pretty clear. Flesh not very hot. Pulse 120, moderately strong. He was ordered to take two spoonfuls of the vomiting mixture (z) every half hour, and afterwards an ounce of the decoction (a) every two hours. Cold water was allowed when he called for it, likewise gruel, and weak wine whey.

Fifth day. The vomit worked him a good deal, and he was somewhat relieved. In the beginning of the night he was restless, but got some sleep towards morning. He had made plenty of urine, but it smelt so strong that the nurse had

(z) R Vini Ipecac. ʒi.
Tart. Emetic. Gr. vi.
Aquæ fontan. ʒ vii. M.—

(a) R Rad. Senekæ non contusi ʒ i. coquæ ex aquæ
fontan. lb iii. ad lb i. et colat. adde
Succ. Glychirr. ʒ ii.
Sal. Absinthii ʒ i. lb M.—

it thrown away. A little redness was now visible in his eyes towards the outer corners. Pulse soft; more steady than yesterday, 108. Lips not so dry. Throat less tumefied; its colour, as well as that of the skin, less intense. Had a small costive stool this morning.—*Repeat the vomit this evening, and continue the decoction.*

Sixth day. Passed a good night. Urine in good quantity, less offensive to the smell, and its appearance nearly that of a healthy state. Throat quite well. Pulse 68, firm. Skin changing to a brown colour. Appetite returning. Fifteen grains of rhubarb, and three of calomel were given this night at bed time.

Eighth day. Continued free from complaints: slept well; eat well. Pulse 65. This morning, white blisters appeared upon several parts of his hands and fingers, which when cut discharged a small quantity of clear water.

REMARKS.

The livid colour of the skin was thought in this case to indicate the highest degree of putrescency, and the most imminent danger to the patient: but I had learnt long before this, to believe, that the disease had nothing putrid in its nature; and when I considered the favorable appearance of the eyes, and the moderate velocity of the pulse, I could not coincide with the opinions that had been formed of the event. The white blisters have been mentioned by Dr. PLENCIZ, but he believes they never contain any fluid, and having frequently found that to be the case, I subscribed to his opinion; but as the blisters in this patient were filled with a watery fluid, it is probable they were so in others; only we did not happen to examine them until the fluid had been absorbed or evacuated.

C A S E IV.

Inefficacy of bark and blisters—Dropsical symptoms.

A young lady, near seven years of age, was seized on Friday the 30th of October with the usual symptoms of the *Scarlatina anginosa*. The scarlet colour appeared upon the skin on the Sunday following, and began to vanish again on Tuesday without any succeeding desquamation. She continued much indisposed until Thursday the 12th of November, when I was first desired to visit her.

Fourteenth day. I found her in a considerably sleepy state; much averse to being stirred. Her breathing difficult and rattling, particularly when lying down, for which reason she was generally kept upon the lap. Her skin dry; flesh not very hot; pulse 136 in a minute. Tongue dry, and brown in the middle; skin of her lips black and ragged. She was universally bloated, but her legs most so towards night. Her fauces appeared tumefied, and by the assistance of an injected gargle she threw up viscid

mucus. Urine small in quantity, appetite altogether wanting.

She was directed to take four grains of James's powder, and to repeat the dose every hour for three times; afterwards two spoonfuls of a diuretic solution (*b*) were given every second or third hour.

Fifteenth day. But little alteration.
—*Continue the medicines.*

Sixteenth day. Pulse 130. Urine more plentiful. In other respects nearly the same. (*c*) Six grains of fossil alkaly purified, were directed to be taken in solution every four hours, and a gargle with oxymel of squills frequently injected into the throat.

Seventeenth day. Tongue clearer. In other respects but little alteration.

(*b*) R. Sal. Diuret. ʒ iii.
Sacch. alb. ʒ ii. fs
Spt. Lav. Comp. ʒ fs
Aq. hordeat. ʒ vi. M.—

(*c*) R. Calomel. ppt. Gr. iii.
Pulv. Test. Ostr. Gr. vi. M. f. p. statem sumend.

Eighteenth day. Discharges a great quantity of viscid, white, opaque stuff from her throat and nostrils. Tongue quite clean. Flesh not hot. Belly regular. Swelling something abated. Complains of great soreness in her wrists and ancles. Pulse still 130. She was directed to drink freely of Seltzer water.

Nineteenth day. Had a better night. Pulse 120. Went out in a chaise and seemed refreshed by it. The sleepiness and swelling abated.

Twentieth day. Passed a good night. Pulse now only 108, and much firmer. Urine plentiful and depositing a copious lateritious sediment. Soreness of her limbs, and swelling of her legs considerably decreased. The bark was now directed, Seltzer water for her common drink, and daily exercise in a chariot.

Twenty-first day. Has had a very good night. Makes more water than ever. Appetite begins to return.

Twenty-second day. Pulse 96. Stood alone to day for the first time.

Twenty-fourth day. Appetite very good. Pulse 84. Strong enough to walk about the room. Skin peeling off.—From this time her further recovery was rapid and uninterrupted.

REMARKS.

This young lady was first taken ill at a boarding school some distance from Birmingham, so that I had no opportunity of knowing how she was treated in the beginning, but when I first saw her she was taking bark medicines. Her elder sister fell a victim to the same disease a short time before, and she, I understood, took bark and was blistered. A younger sister was taken ill upon Tuesday the 10th of November. The third, fourth, and fifth day, she took a strong vomit; was allowed to drink freely of Seltzer water. Vomits were afterwards given every other day, to promote the discharge of mucus from the throat and nostrils, and thus the cure was effected without the assistance of any other medicine.

C A S E V.

Pain in the limbs — Great soreness — Strong tendency to delirium.

Mr. M—, 20 years of age, was seized in the evening of the 15th of November, with slight, alternating, heats and colds. Passed a very restless night, hardly sleeping five minutes at a time. The next morning he felt his throat sore; complained of sickness; great pain in his head, back and limbs. Still hot and cold by fits. The third day his skin began to turn red, and he could not rest a minute for the troublesome itching and pricking all over him.

Fourth day. I first saw him. His skin was now universally scarlet and intensely hot. His eyes red; his tongue white, except at the end and at the edges. His fauces of a full scarlet colour and tumefied, but without any appearance of sloughs or ulcers. He complained of thirst, and was frequently sick; his pulse 120; small, but not very feeble. He was exceedingly restless, and delirious whenever he closed his eyes. He had

taken one vomit, also powders of seneka and contrayerva, and a solution of salt of wormwood. These medicines were ordered to be continued, and a stronger vomit given at night.

Fifth day. He vomited much, and afterwards had two purging stools. Has had a bad night from restlessness and painful soreness in all his limbs, which still continues. Throat less sore and less tumefied. Scarlet colour of the skin nearly the same; but on the inside of the wrists there are a few very minute pustules with white heads, visible through a magnifying glass. Head easy; eyes not impatient of the light. Inclined to sickness when he swallows any thing. Urine plentiful, of a natural colour, with a light mucous cloud floating in it. He was ordered to drink gruel, tea, and cold water. To take a powder (*d*) every four

(*d*) R. Rad. Contrayerva. Gr. v.

Test. Ostr. ppt. ʒss. M. f. pulv.

hours, and a wine glass full of solution (e) at the intermediate times.

Sixth day. Passed a restless night, and somewhat delirious. Inclination to sickness ceased. Urine very plentiful. The scarlet colour on the upper part of his body less intense: that on his legs and thighs the same. Pulse 108. Complains chiefly of soreness all over him, but says he is much better—*Let the same medicine be continued.*

Seventh day. Little or no sleep in the night, having been teased with the appearances of strange images the moment he closed his eyes. Scarlet colour turning brown. Great soreness about his neck and shoulders, but in other respects much better; and able to sit up several times to day. Pulse 98. He was ordered to

(e) R. Sal. Sodæ ℥ ii.

Extr. Glychirr. ℥ i.

Aq. fontan.

— Menth. vulg. simpl. $\overline{a}a$ 3 iii. ℥s

—Cinnam. Sp^t. 3 i. M.

take a purging bolus (*f*) at bed time, his usual medicines the following day, and a composing draught (*g*) at night.

Ninth day. The purge worked moderately. Passed the night comfortably. Skin universally brown. Pulse 94. Eyes watery, and impatient of the light. Soreness partly gone. Appetite returning. The composing draught to be given again at night, and the next morning to begin with the tincture of bark and Virginia snake root.

Eleventh day. Appetite good. Pulse 80. Eyes less tender. Skin peeling off. Tongue very sore, but nothing remarkable to be seen upon it.—From this time he continued mending daily, and was soon restored to health.

(*f*) R. Rad. Rhei. Gr. xii.
Calomel. ppt. Gr. vi.
Cons. Rosar. ℥ i.
Syrup. ut. f. Bol.

(*g*) R. Syrup. e Mecon. ℥ ii.
Tinct. Thebaïc. gutt. xv.
Aquæ Menth. vulg. simpl.
—— fontan. āā ℥ vi. M.

C A S E VI.

Autumnal appearance — Sloughs and great tumefaction in the throat — Bark detrimental.

Mrs. ———, a married lady, about 35 years of age, felt a sensation of rawness in her throat on Friday evening the 20th of November; but passed a good night. The next morning she was chilly and weary, with an aching all over her. These symptoms continued till eight at night, when she became very hot, and continued so until Sunday morning. The soreness in her throat was still but trifling. The preceding night she had taken five grains of James's powder, which excited a pretty copious perspiration. She continued very much indisposed all Sunday, the feverish symptoms ran high, and a blister was applied on the right side of her neck. On Monday the feverish symptoms continued nearly the same: the left side of the fauces being now as much affected as the other, a blister was applied also to that side of the throat. Some white specks which had appeared in the throat before, were now increased so as to spread over both tonsils,

and the back of the fauces. In this situation I was desired to visit her. I found her labouring under great anxiety; her countenance pale, her respiration difficult, her voice inarticulate, her pulse 130, rather irregular, but not very feeble. She had passed the night with such oppressive feelings about her chest and stomach that she durst not attempt to sleep, and her deglutition was now so much impaired, and the attempt so extremely painful, that nothing less than the greatest degree of fortitude could enable her to swallow. She had hitherto taken bark freely, but it purged her; small doses of laudanum were then added to prevent that effect, and the bark was continued to the amount of a dram of the powder every four hours, and two ounces of strong decoction with tincture in the intermediate times. When it was impossible to swallow any more bark, cordial draughts composed of confectio cardiaca and volatile salt were directed. She had felt her oppression and distress increase after every dose of the bark, but filled with the idea of her disease being putrid, and that nothing but the bark

could stop the progress of the gangrenous sloughs, she had persevered with unusual assiduity in the method prescribed.

I immediately ordered a vomit (*b*) which cost her very great exertion to get down. It acted in a short time, and she was sensibly relieved. When the sickness abated she took half one of the cordial draughts that was in readiness; afterwards a powder (*i*) every two hours, and used the gargle (*k*) very frequently with the assistance of a syringe.

(*b*) R. Tart. Emet. Gr. ii.
Vini Ipecac. ℥ i.
Aquæ fontan. ℥ vi.
Acet. Scillit. ℥ ii. M.—

(*i*) R. Rad. Senek. sublt. pulv. Gr. v.
- - - Contr. pulv. Gr. vii.
Cretæ ppt. ℥ ss M. f. pulv.

(*k*) R. Rad. Contrayerv. ℥ ss.
Aquæ fontan. ℥ xii. coque ad
℥ viii. et. colat. adde
Oxymel. Scillit. ℥ ss.
Sal Absinth. ℥ i. M.

Fifth day. Slept very comfortably for four hours in the night. The great oppression and anxiety removed. The sloughs in the fauces beginning to separate at the edges ; her voice still inarticulate, and the act of deglutition considerably painful, but not so much so as to prevent her getting down her medicines and a sufficiency of liquid nourishment. Pulse 120.

From this time she continued mending. On the seventh day she was universally better, and slept very comfortably. On the eighth day she took solid food for her dinner ; and on the ninth the sloughs in her throat were all cleared away. In the beginning of this disease her urine was small in quantity, but as she grew better it became very considerable. The syringing occasioned very great quantities of viscid mucus to be discharged from her throat and nostrils. Through the whole course of the disease she had a great tendency to delirium, whenever she attempted to sleep. As she recovered, her skin peeled off ; and she was tormented for some days with a great soreness of her tongue.

REMARKS.

The tendency to the formation of gangrenous sloughs in the throat, seems to be nearly proportioned to the violence of the inflammation. If this inflammation is increased by improper treatment, formed upon the idea of the disease being putrid, ~~the~~ consequences are a rapid increase of the inflammation and the gangrene. But if emetics are exhibited at first, and occasionally repeated, I never see the sloughs continue for twenty four hours. It is observable, that in this case the desquamation of the skin took place, notwithstanding there was neither eruption nor discoloration at any time of the disease.

FINIS.

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